

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE J		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 0001		3. EFFECTIVE DATE 16-Oct-2001		4. REQUISITION/PURCHASE REQ. NO. W32CS512073299		5. PROJECT NO. (If applicable)	
6. ISSUED BY USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412		CODE DACW17		7. ADMINISTERED BY (If other than item 6) See Item 6		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. DACW17-01-B-0018			
				<input checked="" type="checkbox"/> 9B. DATED (SEE ITEM 11) 20-Sep-2001			
				10A. MOD. OF CONTRACT/ORDER NO.			
				10B. DATED (SEE ITEM 13)			
CODE		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 0 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) KINGS BAY, GEORGIA AND FERNANDINA HARBOR, FLORIDA MAINTENANCE DREDGING, 46-FOOT PROJECT, ENTRANCE CHANNEL, CUT-1N, NASSAU COUNTY, FLORIDA BID OPENING DATE REMAINS UNCHANGED. THIS AMENDMENT POSTED ON JACKSONVILLE DISTRICT WEB SITE ONLY. A NEW CD ROM WILL NOT BE ISSUED FOR THIS AMENDMENT. SEE CONTINUATION PAGE FOR CHANGES.							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 16-Oct-2001	

EXCEPTION TO SF 30
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

SF 30 CONTINUATION SHEET

1. SPECIFICATIONS:

A. Either asterisks appear before and after the line or lines where revisions have been made to the text on the enclosed revised or added pages or the text changes have been updated with additions noted with underlined text and deletions noted with line/cross-outs, and pertain only to changes made by this amendment.

B. The text changes may have necessitated reformatting of subsequent text or pages. If this is the case, those pages have also been issued as amended pages but are not marked with asterisks or underlined text and line/cross-outs.

ADD the Amendment Number 0001 STANDARD FORM 30.

SECTION 00010, page 00010-4, BIDDING SCHEDULE; DELETE the page 00010-4 BIDDING SCHEDULE and REPLACE with the attached revised page 00010-4 BIDDING SCHEDULE.

SECTION 01000: GENERAL REQUIREMENTS; DELETE SECTION 01000, excluding the Appendices and REPLACE with the attached revised SECTION 01000, excluding the Appendices. REVISE APPENDIX 01000-F, CORE BORING LOGS AND LABORATORY DATA as follows: DELETE the CORE BORING NOTES (the second and third pages) and REPLACE with the attached revised CORE BORING NOTES. Also, ADD the attached new DRILLING LOG for Hole No. CB-KBM97-7 to APPENDIX 01000-F, CORE BORING LOGS AND LABORATORY DATA.

SECTION 01270: MEASUREMENT AND PAYMENT; DELETE SECTION 01270 in it's entirety and REPLACE with the attached revised SECTION 01270 in it's entirety.

SECTION 01330: SUBMITTAL REQUIREMENTS; DELETE SECTION 01330 Appendix 01330-A and REPLACE with the attached revised SECTION 01330 Appendix 01330-A.

SECTION 01410: ENVIRONMENT PROTECTION; DELETE SECTION 01410, excluding the Appendices and REPLACE with the attached revised SECTION 01410, excluding the Appendices; however, ADD new Appendices 01410-K and 01410-L.

SECTION 01411: TURBIDITY AND DISPOSAL MONITORING; DELETE SECTION 01411, excluding the Appendix and REPLACE with the attached revised SECTION 01411, excluding the Appendix.

SECTION 01451: CONTRACTOR QUALITY CONTROL; DELETE SECTION 01451, excluding the Appendices and REPLACE with the attached revised SECTION 01451, excluding the Appendices.

SECTION 02325: DREDGING; DELETE SECTION 02325, excluding the Appendices and REPLACE with the attached revised SECTION 02325, excluding the Appendices; however, ADD new Appendices 02325-C and 02325-D.

2. DRAWINGS:

D.O. File No. 90K-38,194 dated 4 April 2001 in 16 Sheets + Cover:

DELETE Drawing Nos. 2/2, 2/5 and 2/10 and REPLACE with the attached revised Drawing Nos. 2/2, 2/5 and 2/10.

SECTION 00010

SUPPLIES OR SERVICES AND PRICES/COSTS

**KINGS BAY, GEORGIA AND FERNANDINA HARBOR, FLORIDA, MAINTENANCE DREDGING,
46-FOOT PROJECT, ENTRANCE CHANNEL, CUT-1N, NASSAU COUNTY, FLORIDA**

<u>LINE ITEM</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
0001	MOBILIZATION AND DEMOBILIZATION (SEE SECTION 00800)	1	LUMP SUM		\$ _____
0002 *	EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY)(SEE NOTE (1)) CUT-1N, STATION 100+00 TO CUT-1N STATION 220+00 USING BEACH DISPOSAL AREA D/A-B	200,000	CUBIC YARD	\$ _____	\$ _____ *
0003 *	EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY)(SEE NOTE (1)) CUT-1N, STATION 220+00 TO CUT-1N STATION 230+00 NORTH HALF OF CHANNEL USING NEAR SHORE DISPOSAL AREA	28,000	CUBIC YARD	\$ _____	\$ _____ *
0004	EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY)(1) CUT-1N, STATION 220+00 TO CUT-1N STATION 340+00 USING OCEAN DISPOSAL AREA D/A-O	672,000	CUBIC YARD	\$ _____	\$ _____
*0005	SEA TURTLE TRAWLING AND RELOCATION MOBILIZATION AND DEMOBILIZATION (SEE NOTE (5))	1	LUMP SUM		\$ _____
0006	SEA TURTLE TRAWLING AND RELOCATION (ESTIMATED QUANTITY)(SEE NOTE (5))	14	DAY	\$ _____	\$ _____
0007	ENDANGERED SPECIES MONITORING (SEE SECTION 01410)	1	LUMP SUM		\$ _____ *
*0008	TURBIDITY AND DISPOSAL MONITORING (SEE SECTION 01411)	1	LUMP SUM		\$ _____ *
 *	TOTAL (LINE ITEMS 0001 THROUGH 0008)				 \$ _____ *

NOTES:

(1) QUANTITY INCLUDES REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SHOALING ESTIMATED TO OCCUR BETWEEN DATES OF SURVEYS SHOWN ON DRAWINGS AND ACTUAL DREDGING.

(2) ALL BIDS MUST BE FOR THE ENTIRE WORK AND MUST HAVE EACH BLANK SPACE COMPLETED.

(3) FAILURE TO COMPLETE AND RETURN ALL REQUIRED SUBMISSIONS (SF 1442, SECTION 00010, (EXCEPT WAGE RATES) AND SECTION 00600) COULD RENDER YOUR BID NONRESPONSIVE.

(4) SEE SECTION 00100, "BIDDING SCHEDULE / INSTRUCTIONS TO BIDDERS."

(5) SEA TURTLE TRAWLING AND RELOCATION IS REQUIRED IF THE CONTRACTOR TAKES THREE OR MORE SEA TURTLES DURING DREDGE OPERATIONS.

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SECTION 01000

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SECTION 01000

GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 PARTNERING

In order to most effectively accomplish this contract, the Government is willing to form a cohesive partnership with the Contractor and its subcontractors. This partnership would strive to draw on the strengths of each organization in an effort to achieve a quality project done right the first time, within budget and on schedule. This partnership would be bilateral in make-up and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties and will be shared equally by the Government and the Contractor.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

CORPS OF ENGINEERS JACKSONVILLE REGULATION (CESAJR)

CESAJR 385-1-1 (1998) Safety and Occupational Health Program

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

As-Built Contract Drawings; FIO. Electronic As-Built Files; FIO.

Refer to paragraph PROJECT RECORD DOCUMENTS for procedure.

1.4 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

a. Read this paragraph in conjunction with the Clause COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.211-10) of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

b. It is the intent of the Government to issue the Notice to Proceed (NTP) on 20 November with commencement of work on 15 December.

c. In addition to the above, the following shall apply: The words "commence work" means "commence dredging." The commencement time of 25 days applies unless precluded by inclement weather as determined by the Contracting Officer.

1.5 LIQUIDATED DAMAGES-CONSTRUCTION

Refer to the Clause LIQUIDATED DAMAGES-CONSTRUCTION (FAR 52.211-12) of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

1.6 PROJECT RECORD DOCUMENTS

This paragraph covers as-built drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings. At the Preconstruction Conference, the Contracting Officer's Representative will furnish to the Contractor one set of electronic files which reflect the contract drawings as awarded. The files will be furnished in the latest version of Microstation by Bentley Systems, Inc., on CD-ROM.

1.6.1 As-Built Contract Drawings

The Contractor shall maintain a separate set of full-size contract drawings, marked up in red, to indicate as-built conditions. Each as-built contract drawing shall include the Contract Number DACW17-XX-C-XXXX associated with the contract. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those caused by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. Upon completion of the work, the Contractor shall sign the marked-up drawings in the following manner: "I CERTIFY THAT THESE CORRECTED DRAWINGS INDICATE CONSTRUCTION AS ACTUALLY PERFORMED AND ARE AN ACCURATE REPRESENTATION OF THE SPECIFIED WORK. THESE CORRECTED DRAWINGS ARE APPROVED FOR PREPARATION OF AS-BUILT CONSTRUCTION DRAWINGS." The marked-up drawings shall then be furnished to the Contracting Officer prior to acceptance of the work. The Government reserves the right to withhold final payment until acceptable as-built contract drawings have been submitted.

1.6.2 Electronic As-Built Files

In addition to the As-Built Contract Drawings specified above, the Contractor shall furnish electronic files reflecting the as-built condition. The Contractor shall download electronic files furnished at the Preconstruction Conference by the Contracting Officer's Representative into his own system and shall use the downloaded files in creating an electronic file for recording the "as-built" conditions. On a monthly basis, the Contractor shall furnish a copy of the electronic "as-built" files to the Contracting Officer's Representative for review. If the Contractor's approved shop drawings significantly change the contract drawings to the extent that it is not possible to revise the files electronically, then the contract drawing area effected shall be enclosed and cross referenced to

the "as-built" shop drawings. Upon completion of construction, and as a condition to final payment, the Contractor shall furnish to the Contracting Officer two sets of electronic files, as approved by the Contracting Officer's Representative, reflecting the final "as-built" contract drawings. The files shall be furnished in the latest version of Microstation.

1.7 PHYSICAL DATA

Read this paragraph in conjunction with the Clause PHYSICAL DATA (FAR 52.236-4) of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

1.7.1 Physical Conditions

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and/or by core borings. When the indicated physical conditions are the result of site investigations by core borings, the core boring logs and laboratory data are appended to the end of this Section and the core boring locations are shown on the drawings. While the Government's borings are representative of subsurface conditions at their respective locations and vertical reaches, local variations characteristic of the rocks and subsurface materials of this region are to be expected. The material recovered from the core borings is not available for inspection.

1.7.2 Location

The project site is located on the northeast coast of Florida in Nassau County, at north Amelia Island.

1.7.3 Weather Conditions

The project area is subject to tropical storms and hurricanes from June through November and to windy and/or rainy weather during any time of the year. The climate of the area is essentially subtropical, and temperatures below freezing occur infrequently. The wet season in the project area is from May through October. In general, the winter months constitute the dry season and rainfall is usually associated with mid-latitude systems (fronts and low pressure systems) and is distributed in a spatially uniform pattern. The summer months comprise the wet season and rainfall is closely associated with convective activity. These rainfall events are normally of short duration and amounts are quite variable spatially. Occasionally, daily rainfall in the dry season can be quite heavy as mid-latitude systems penetrate into Florida. The Contractor shall maintain full-time monitoring of the NOAA marine weather broadcasts, and avail themselves of such other local commercial weather forecasting services as may be available.

It shall be the Contractor's responsibility to obtain information concerning rain, wind, and wave conditions that could influence his dredging and disposal operations. Reference is made to the following publications which contain climatological and meteorological observations and data. The publication "Local Climatological Data - Monthly Summary" published by NOAA, Asheville, North Carolina, contains climatological and meteorological observations and data. This publication gives hourly wind speed and direction observations for "Jacksonville International Airport, Jacksonville, Florida". The Annual Summary gives a summary of the observations for the period of record. This publication is available for review in the office of the U.S. Army Corps of Engineers, Jacksonville District Office, 400 West Bay Street, Jacksonville, Florida. Subscription

price and ordering information are available from the National Climatic Data Center, Federal Building, Asheville, N.C. 28801

1.7.3.1 Publications

Wind and Wave Data. The following publications include wind and wave information, and are available for review in the Jacksonville District Office or can be purchased from the agencies indicated:

1. **U.S. Coast Pilot, Atlantic Coast: Cape Henry to Key West, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service.** This publication supplements the navigational information shown on the nautical charts. It also provides miscellaneous meteorological data. This publication is available through NOAA.

2. **Hindcast Wave Information for the U.S. Atlantic Coast, Wave Information Studies of U.S. Coastlines, WIS Report 30, Waterways Experiment Station, March 1993.** This report presents 20-year wave hindcast summaries at various stations located along the U.S. Atlantic Ocean shoreline, including a location offshore of the project area. Available data includes wave height, period, and direction tables for two 20-year periods: 1956-1975 (excludes tropical disturbances/hurricanes), and 1976-1995 (includes tropical disturbances/hurricanes), summary wind speed and wind direction tables, summary tables of mean wave heights by month and year, largest wave heights by month and year, and a table of extreme wave events. The project site is protected from direct impact from ocean waves, but other meteorological data contained in this publication may be useful. This publication is available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Time series listings of wave data for both 20-year periods and some summary information are available at the Waterways Experiment Station Website at: "<http://bigfoot.wes.army.mil/u003.html>."

3. **National Data Buoy Center (NDBC) Website.** This Internet website provides a wide range of meteorological and oceanographic buoy data collected worldwide. The project area lies almost midway between two sets of data buoys--buoy #41080, which lies off the Georgia coast near Savannah, and buoys #41009 and #41010, which lie offshore of Cape Canaveral. Data provided on this website includes wind speed, wind gusts, atmospheric pressure, air temperature, sea temperature, wave height, and wave period. In addition, a C-MAN station (station SAUF1, providing meteorological data only--no wave data) is located at the St. Augustine Beach pier, and may provide some data which is applicable to the project area. Gage readings are updated hourly. Archived data is available for these buoys from 1988 to the present. The Website address is: <http://www.nws.fsu.edu/buoy/>.

1.7.4 Transportation Facilities

1.7.4.1 Major Highways, Airports, Port Facilities, and Rail Access

The project site is accessible from water via the Intracoastal Waterway and the Atlantic Ocean. Fernandina Beach is served by State Road A1A, 105, and 200; by port facilities, by the Fernandina Beach Municipal Airport; and by CSX Transportation Railroad.

1.7.4.2 Contractor Investigation

In addition to the information given in the contract drawings, the Contractor shall make his own investigation of available roads for transportation, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the site. The Contractor shall investigate the availability of railroad sidings, and shall make all arrangements for use of any sidings for the delivery of any materials and equipment to be used on the work.

1.7.5 Maritime Traffic

Marine Traffic in the project area consists of Naval, commercial, pleasure, and small recreational vessels of all types and sizes which can be accommodated by existing depths.

1.7.6 Local Conditions - Water Stages and Tides

1.7.6.1 Water Fluctuations

The below stated water fluctuations are for information only and are not to be utilized in conjunction with any contract related hydrographic surveying. Reference should be made to the water level datum for surveying purposes as noted on the control drawings(s) of the contract plans.

1.7.6.2 Water Stages

Water levels in the project area are mainly affected by tidal fluctuations in the Atlantic Ocean. The project area is also subject to storm surges from hurricanes and tropical storms from June through November. Surges from extratropical storms may affect the area during any time of the year.

Elevations of tidal datums referred to mean lower low water (MLLW) are provided in the following table. These values are based on field measurements collected at a tide gage operated by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). This tide gage is located on the Amelia River in Fernandina Beach, Florida. These and other tidal datums at nearby locations can be obtained through the NOAA Website: http://co-ops.nos.noaa.gov/bench_mark.shtml?region=fl.

MEAN HIGHER HIGH WATER (MHHW)	=	6.60 FEET
MEAN HIGH WATER (MHW)	=	6.26 FEET
MEAN TIDE LEVEL (MTL)	=	3.23 FEET
*NATIONAL GEODETIC VERTICAL		
DATUM-1929 (NGVD)	=	2.95 FEET
MEAN LOW WATER (MLW)	=	0.20 FOOT
MEAN LOWER LOW WATER (MLLW)	=	0.00 FOOT

*NGVD reference based on elevations published in Quad 300811, 1973, and NOS leveling of 1985.

Daily tidal predictions at locations along the coastline of North and South America, including locations in the vicinity of the project can be found in the publication **East Coast of North and South America Tide Tables, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service**. In addition to daily tidal predictions, this publication provides mean and spring tide ranges and mean tide levels. Some astronomical data is also included in this publication, such as time

of sunrise, sunset, moonrise, and moonset. This publication is available through NOAA. Additional data can be obtained at the NOAA Website: <http://co-ops.nos.noaa.gov>.

1.7.7 Subsurface Investigations

Refer to core boring logs and laboratory data appended to the end of this Section.

1.7.8 Obstruction of Channel

The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the River and Harbor Act approved 8 August 1917.

The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of any vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon completion of the work the Contractor shall promptly remove his plant, including ranges, buoys, piles, and other marks placed by him under the contract in navigable waters or on shore.

1.7.9 Staging Area(s)

The Contractor shall be responsible for obtaining any staging area(s) that he may determine to be necessary in support of his dredging and/or disposal operations.

1.8 PROGRESS CHARTS

1.8.1 Schedules for Construction Contracts

In conjunction with the Clause SCHEDULES FOR CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES, the Contractor shall be guided by the following requirements and procedures as pertain to submission of an initial and subsequent periodic construction progress charts. These charts as approved and updated shall provide the basis for determination of the amounts of partial payments.

1.8.2 Forms 2454

Blank ENG Forms 2454 will be furnished to the Contractor as soon after award as practicable for his use in submitting his contract progress schedules for approval. Three copies of full size and legible monthly updated progress schedules are to be furnished by the Contractor and submitted with all progress payments. Sample ENG 2454 is appended to the end of this Section.

1.8.3 Preparation of Progress Chart

The Contractor shall indicate on the progress chart the bid items contained in the contract, showing the amount of the item and its relative weighted percentage of the total contract. The Contractor may separate features of work under each item to show salient work elements such as procurement of materials, plant and equipment, and supplemental work elements such as excavation, reinforcing steel, backfill, etc. These salient features shall total to the cost and weighted percentages shown for the major bid item.

When quantity variations impact the weighted percentage of a separate item by five percent or more, the Contractor shall revise the contract progress charts to accurately reflect the impact of such variations.

1.8.4 Modifications

Modifications to the contract which are minor in nature shall be listed and scheduled separately in order of their issuance and as reported on the associated request for partial payment. Completion of work on minor modifications shall be noted as work progresses. When major modifications are issued in which one or more of the bid items are significantly changed monetarily or in time of completion, the progress schedule should be revised to incorporate such changes showing revised item completion dates and overall new completion date, as applicable.

1.9 INSPECTION

1.9.1 Quality Assurance Representative (QAR)

The QAR shall be notified prior to the establishment of horizontal control work (baseline layout, ranges, station flags, shore-based control for EPS/RPS, etc.) and vertical control work (tide staff(s), upland cross sections, construction elevations top/invert, maximum/minimum elevations of dredged materials within disposal area(s), etc.), but the presence or absence of the QAR shall not relieve the Contractor of his responsibility for proper execution of the work in accordance with the specifications. The Contractor will be required:

a. To furnish, on the request of the Contracting Officer or any QAR, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work. However, the Contractor will not be required to furnish such facilities for the surveys prescribed in the paragraph FINAL EXAMINATION AND ACCEPTANCE of this Section.

b. To furnish, on the request of the Contracting Officer or any QAR, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and to and from the disposal area and/or beach placement.

1.9.2 Failure to Comply

In conjunction with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES, should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer and the cost thereof will be deducted from any amounts due or to become due the Contractor.

1.10 FINAL EXAMINATION AND ACCEPTANCE

1.10.1 Final Examination of Work

As soon as practicable and no later than three (3) weeks after the completion of the entire work or any section thereof (if the work is divided into sections) as in the opinion of the Contracting Officer will not be subject to damage by further operations under the contract, such work will be thoroughly examined at the cost and expense of the Government by sounding or by sweeping, or both, as determined by the Contracting

Officer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor will be required to remove same by dragging the bottom or by dredging at the contract rate of dredging. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than two sounding or sweeping operations by the Government over an area be necessary by reason of work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent soundings or sweeping operations will be charged against the Contractor at the rate of \$5,500 per day for each day in which the Government plant is engaged in sounding or sweeping and/or is enroute to or from the site or held at or near the said site for such operation.

1.10.2 Final Acceptance

Final acceptance of the whole or a part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

1.11 SHOALING

If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished channel because of the natural lowering of the side slopes, redredging at contract price, within the limits of available funds may be done if agreeable to both the Contractor and the Contracting Officer.

1.12 CONSTRUCTION PROJECT SIGNS

Except when otherwise directed by the Contracting Officer, the Contractor shall furnish, install, and maintain the construction project signs at the worksite(s) covered under this contract. The construction project signs (a project identification sign and a safety performance sign) shall be as indicated in the appendix at the end of this Section, and shall be erected, where directed, within thirty (30) calendar days after receipt of the Notice to Proceed. The sample Safety Scoreboard sign appended to the end of this Section shall be used on board the dredge in lieu of the safety performance sign. This applies only to the dredge. The signs shall be of the construction, size, format, and style indicated, shall be neatly and sturdily constructed, and shall be securely erected in a workmanlike manner to support the sign properly for the life of the contract. The name of the facilities shown in the appendix are for illustration only. No sign shall be prepared until the facility name applicable to the work under the contract has been furnished by the Contracting Officer.

1.12.1 Signage Removal

Upon completion of construction and when so directed by the Contracting Officer, the construction project signs shall be removed by the Contractor during the final cleanup process. The signs shall be disposed of by the Contractor in a manner satisfactory to the Contracting Officer.

1.12.2 Signage Costs

All costs connected with the furnishing, installation, maintenance, and

removal of the construction project signs shall be included in the total contract price of the items listed in the Bidding Schedule.

1.13 WATER

a. The responsibility shall be upon the Contractor to provide and maintain at his own expense an adequate supply of water for his use for construction, and to install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. In the event water is made available by the Government, the Contractor shall, at his own expense, install a meter to determine the amount of water used by him and such water will be paid for by, or charged to, the Contractor at prevailing rates or at reasonable rates as determined by the Contracting Officer. Before final acceptance, temporary connections and piping installed by the Contractor shall be removed in a manner satisfactory to the Contracting Officer.

b. The Contractor shall provide and maintain his own temporary toilet and washing facilities. Toilet and washing facilities shall be installed and maintained in compliance with the provisions of the latest version of EM 385-1-1 in a location approved by the Contracting Officer.

1.14 ELECTRICITY

a. All electric current required by the Contractor shall be furnished at his own expense. All temporary connections for electricity shall conform to the requirements of the latest versions of EM 385-1-1, CESAJR 385-1-1, and NFPA 70, and be subject to the approval of the Contracting Officer. In the event electricity is made available by the Government, the Contractor shall, at his own expense, install a meter to determine the amount of current used by him and such electricity will be paid for by, or charged to, the Contractor at prevailing rates or at reasonable rates as determined by the Contracting Officer. All temporary lines will be furnished, installed, connected, and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer and shall be removed by the Contractor in like manner at his expense prior to completion of the construction.

b. In accordance with the latest versions of EM 385-1-1, CESAJR 385-1-1, and NFPA 70, the Contractor shall provide Ground Fault Circuit Interruption (GFCI) on all 120 volt, 15 and 20 ampere, single phase receptacles used for construction power. Ground Fault Circuit Interrupters are not an acceptable substitute for grounding.

1.15 HURRICANE AND SEVERE STORM PLAN

1.15.1 Plan Contents

Within ~~20~~15 calendar days after the Notice of Award, the Contractor shall submit as an attachment to his Accident Prevention Plan, a Hurricane and Severe Storm Plan for review and acceptance. This plan shall include but not be limited to the following:

a. Types of storms anticipated (Winter storm, Hurricane, Tornado).

b. Time intervals before storms when action will be taken and details of the actions taken.

- c. List of the equipment to be used on the job and its ability to handle adverse weather.
- d. List of safe harbors and the distance from the work area to these harbors and the time required to move the equipment to these harbors. Copies of letters of approval for the use of these safe harbors (local authorities, U.S. Coast Guard, etc.) where applicable.
- e. Method of securing equipment in these safe harbors.
- f. List of equipment to be utilized to make this move to safe harbors (tug boats, work boats, etc.), to include the name and horsepower of this equipment.
- g. Methods of securing equipment not moved; i.e., pipelines (floating or submerged), pumpout stations, etc.
- h. Plan of evacuation to include interim measures, i.e., immediate reaction plans to be taken for all storm occurrences, particularly sudden/flash storms.
- i. Operating procedures to be undertaken when critical dredge equipment fails during sudden and severe adverse weather conditions, to include breaking of spuds, swing wires, anchor wires, or other mooring equipment or facilities.

1.15.2 Sample Plan

Appended to the end of this Section is a sample Hurricane and Severe Storm Plan to be used for illustrative purposes only.

1.15.3 Monitoring of Weather

The Contractor shall maintain full-time monitoring of the NOAA marine weather broadcasts, and avail themselves of such other local commercial weather forecasting services as may be available. These information broadcasts shall be the Contractor's primary source in the decision process to implement action under the approved storm plan.

1.16 PRECONSTRUCTION CONFERENCE

A Preconstruction Conference will be arranged by the Contracting Officer's Representative after award of contract and shall be held before Notice to Proceed is issued. (However, see subparagraph "Failure to Comply" below.) The Contracting Officer's Representative will notify the Contractor of the time and date set for the meeting. At this conference, the Contractor shall be oriented with respect to Government procedures and line of authority, contractual, administrative, and construction matters. Additionally, a schedule of required submittals will be discussed. Minutes of the meeting shall be prepared by the Contracting Officer or Contracting Officer's Representative and signed by both the Contractor and the Contracting Officer or Contracting Officer's Representative. The minutes shall become a part of the contract file. There may also be occasions when subsequent conferences will be called to reconfirm mutual understanding.

1.16.1 Preconstruction Conference Submittal Items

Within fifteen (15) calendar days after the date of the Notice of Award,

the Contractor shall submit the following items in either completed or draft form for review by the Contracting Officer's Representative prior to the preconstruction conference:

Letter Appointing Superintendent

Power of Attorney and Certified Copy of Resolution for local representatives (if local representative will be allowed to sign contract documents)

Affirmative Action Plan, Refer to Clause EQUAL OPPORTUNITY of Section 00700 CONTRACT CLAUSES.

Drug-Free Workplace, Refer to Clause DRUG-FREE WORKPLACE of Section 00700 CONTRACT CLAUSES.

List of Subcontractors, Refer to Clauses SUBCONTRACTS (LABOR STANDARDS) and LIMITATIONS ON SUBCONTRACTING of Section 00700 CONTRACT CLAUSES, and, if included, paragraph LIMITATIONS ON SUBSTITUTIONS FOR CERTAIN POSITIONS AND/OR SUBCONTRACTOR'S of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

Accident Prevention Plan (including Activity Hazards Analysis as outlined in EM 385-1-1, Appendix A and Figure 1 of Section 1, Hurricane and Severe Storm Plan, and Employee Safety and Health Indoctrination (ESHI) (sample ESHI appended to the end of this Section).

Hazard Communication Program, Refer to Clause HAZARD COMMUNICATION of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

Confined Space Entry Plan, Refer to Clause CONFINED SPACE ENTRY of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

Hurricane and Severe Storm Plan, Refer to paragraph HURRICANE AND SEVERE STORM PLAN of this Section.

Diving Plan (including Activity Hazards Analysis), Refer to Clause DIVING PLAN of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

Quality Control Plan, Refer to Section 01451 CONTRACTOR QUALITY CONTROL.

Completed Electronic Submittal Register

Progress Charts, Refer to Clause SCHEDULES FOR CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES.

Environmental Protection Plan, Refer to Section 01410 ENVIRONMENT PROTECTION.

Other Items as May be Specified Elsewhere

Each Plan shall be submitted as an enclosure to a letter, signed by a Corporate Official of the Contractor. The letter shall state that the Plan complies with all requirements of the contract.

1.16.2 Failure to Comply

~~Failure to comply with the above requirements within the time prescribed will be considered a condition endangering the performance of the contract~~

~~and may be considered grounds for termination of the contract in accordance with the Clause DEFAULT (FIXED PRICE CONSTRUCTION) of Section 00700-CONTRACT CLAUSES.~~ The timing of submission of submittals and completion of the preconstruction conference is intended to allow the Contractor and the Government adequate time to prepare for commencement of work. However, should the Contractor fail to submit required items within the times stated above, the Contracting Officer may issue Notice to Proceed (NTP) prior to receipt of submittals and prior to the preconstruction conference. If NTP is issued prior to the Contractor's compliance with submittal requirements and prior to the preconstruction conference, the Contractor will not be permitted to commence work until these requirements have been satisfied. Any delays attributable to the Contractor's failure to comply with these pre-work requirements shall be at the Contractor's expense and may be cause for remedial action by the Contracting Officer.

1.16.3 Contracting Officer Representative Responsibility

1.16.3.1 Report Preparation Instruction

Instruct the Contractor in the preparation of the Daily Report(s) which the Contractor will submit.

1.16.3.2 Contractor Indoctrination

Inform the Contractor of the requirements to indoctrinate ALL personnel on job site safety prior to the employee commencing any work. The indoctrination shall be signed and dated by the employee and the Supervisor. A copy shall be maintained by the Contractor at the job site.

1.16.3.3 Letter of Record

The letter of record will be written documenting all items discussed at the conference and a copy will be furnished by the Contracting Officer's Representative to all in attendance.

1.17 NOTICE TO PROCEED

The Notice to Proceed (NTP) will not be issued to the Contractor until after the Preconstruction Conference has been completed. However, if the Contractor fails to submit an acceptable Quality Control (QC) Plan, Environmental Protection Plan, Accident Prevention Plan, or other plan(s) required under these specifications, within the time prescribed, construction **SHALL NOT** start unless an acceptable interim plan is submitted. While the Contractor is operating under an acceptable interim plan, the Contracting Officer may retain funds from progress payments in accordance with the Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES until such time as the Contractor submits an acceptable final plan. If an acceptable final plan is not submitted within a reasonable time, as determined by the Contracting Officer, the Contracting Officer may order the Contractor to stop work until such time as an acceptable plan has been submitted. Any such stop work order shall not be considered a suspension of work for an unreasonable period of time under the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES and the Contractor shall not be entitled to pay adjustments as a result of the stop work order.

1.18 CONSTRUCTION PROGRESS CHART, ENG FORM 2454

See APPENDIX 01000-A at the end of this Section (1 page).

1.19 CONSTRUCTION PROJECT SIGNS

See APPENDIX 01000-B at the end of this Section (5 pages).

1.20 DECLARATION OF INSPECTION FOR REFUELING

See APPENDIX 01000-C at the end of this Section (3 pages).

1.21 SAMPLE - HURRICANE AND SEVERE STORM PLAN

See APPENDIX 01000-D at the end of this Section (4 pages).

1.22 SAMPLE - GUIDE FOR EMPLOYEE SAFETY AND OCCUPATIONAL HEALTH
INDOCTRINATION

See APPENDIX 01000-E at the end of this Section (2 pages).

1.23 CORE BORING LOGS AND LABORATORY DATA

See APPENDIX 01000-F at the end of this Section (49 pages).

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

CORE BORING NOTES

1. SELECTED CORE BORING LOGS AND LABORATORY RESULTS ARE ENCLOSED IN THE SPECIFICATIONS FROM 7 PREVIOUS DREDGING EVENTS. NO CORE BORINGS WERE DRILLED FOR THE CURRENT DREDGING EVENT. A COMPLETE SET OF HISTORIC CORE BORING LOGS ARE AVAILABLE FOR INSPECTION AT THE JACKSONVILLE DISTRICT OFFICE.
2. ELEVATIONS ARE IN FEET AND TENTHS OF FEET AND REFER TO MEAN LOW WATER WHICH IS 2.6 FEET BELOW MEAN SEA LEVEL (N.G.V.D. 1929).
3. (SP), (SM), ETC., REFERS TO THE CORPS OF ENGINEERS UNIFIED SOILS CLASSIFICATION SYSTEM. MATERIALS ARE CLASSIFIED ON THE BASIS OF VISUAL EXAMINATION AND LABORATORY ANALYSIS. LABORATORY CLASSIFICATIONS TAKES PRECEDENCE OVER VISUAL FIELD CLASSIFICATIONS.
4. BLS/FT REFER TO THE NUMBER OF HAMMER BLOWS REQUIRED TO ADVANCE A 3" SAMPLER (3" I.D.) OR 2" SAMPLER (2" I.D.) ONE FOOT. THE SAMPLER IS 5 FEET LONG AND IS DRIVEN CONTINUOUSLY 5 FEET WITH A 300 POUND HAMMER, WHERE POSSIBLE. THE TERM "SETTLED" REFERS TO THE SAMPLER PENETRATING THE MATERIALS USING ONLY THE WEIGHT OF THE DRILL RODS.
5. BLOW COUNTS FOR THE 3" SAMPLER AND 2" SAMPLER HAVE NOT BEEN CORRELATED WITH STANDARD SPLIT-SPOON TESTS AS DESIGNATED IN ASTM D-1586. THE CONTRACTOR IS CAUTIONED TO USE JUDGEMENT IN MAKING DETERMINATIONS BASED ON BLOW COUNT DATA FROM THE 3" OR 2" SAMPLER.
6. CORE BORINGS CB-KBM96-14 USED A 2000 POUND, 10 FOOT LONG, 3 ½ INCH I.D. GRAVITY SAMPLER TO RECOVER SAMPLES.
7. THE CORE SAMPLES FROM THE PREVIOUS MAINTENANCE DREDGING EVENTS HAVE BEEN THROWN AWAY.
8. THE CORE BORINGS LOGS HAVE COORDINATES LISTED IN STATE PLANE COORDINATES NAD 27. FOLLOWING ARE THE CONVERSION OF THE NAD 27 COORDINATES TO NAD 83 COORDINATES.

Core Boring	INPUT (transformed to) NAD-27	OUTPUT NAD-83
CB-KBM89-5A	258,743 N 739,747 E	258,902 N 895,984 E
CB-KBM89-7	258,783 N 740,814 E	258,942 N 897,051 E
CB-KBM89-9	259,031 N 747,155 E	259,190 N 903,392 E
CB-KBM89-10	259,429 N 748,067 E	259,588 N 904,304 E
CB-KBM89-12	259,925 N 757,032 E	260,084 N 913,269 E
CB-KBM90-3	258,775 N 737,518 E	258,934 N 893,755 E
CB-KBM90-4	258,935 N 738,726 E	259,094 N 894,963 E
CB-KBM90-5	259,523 N 742,005 E	259,682 N 898,242 E
CB-KBM90-12	259,739 N 753,150 E	259,899 N 909,387 E
CB-KBM91-16	259,234 N 750,832 E	259,393 N 907,069 E
CB-KBM91-20	259,780 N 754,448 E	259,939 N 910,685 E
CB-KBM93-2	258,940 N 736,289 E	259,099 N 892,526 E
CB-KBM93-4	259,034 N 736,916 E	259,193 N 893,153 E
CB-KBM93-5	258,801 N 742,086 E	258,960 N 898,323 E
CB-KBM93-6	259,383 N 743,306 E	259,542 N 899,543 E
CB-KBM93-7	259,044 N 743,720 E	259,203 N 899,957 E
CB-KBM94-4	259,464 N 743,697 E	259,623 N 899,934 E
CB-KBM96-14	259,664 N 751,431 E	259,823 N 907,668 E
* CB-KBM97-7	259,615 N 747,055 E	259,774 N 903,292 E
CB-KBM97-9	259,556 N 749,292 E	259,715 N 905,529 E

*

Hole No.CB-KBM97-7

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Jacksonville District		SHEET 1 OF 1	
1. PROJECT Kings Bay Entrance Channel Maint Dredging				10. SIZE AND TYPE OF BIT See Remarks			
2. LOCATION (Coordinates or Station) X=747,055 Y=259,615				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW (FEET)			
3. DRILLING AGENCY Corps of Engineers, Savannah District				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314			
4. HOLE NO. (As shown on drawing title and file number) CB-KBM97-7				13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 3 undisturbed: 0			
5. NAME OF DRILLER D. Hewett				14. TOTAL NUMBER OF CORE BOXES 1			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				15. ELEVATION GROUND WATER TIDAL			
7. THICKNESS OF BURDEN Ft.				16. DATE HOLE STARTED COMPLETED 5/15/97 5/15/97			
8. DEPTH DRILLED INTO ROCK 0 Ft.				17. ELEVATION TOP OF HOLE -39.5 Ft.			
9. TOTAL DEPTH OF HOLE 13.2 Ft.				18. TOTAL CORE RECOVERY FOR BORING 73 %			
				19. SIGNATURE OF Geologist J. Aurthur Professional Geologist			

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/ 1'
-39.5	0.0					-39.5	0
			SAND, fine quartz, gray. (SP)				12
				42	1	3" SAMPLER	20
							12
							18
							25
-44.5	5.0		Below elevation -44.5, trace fine to coarse sand sized shell fragments.			-44.5	5
							20
				40	2	3" SAMPLER	18
							13
							6
							11
-49.5	10.0		Washed from elevation -49.5 to -51.7			-49.5	10
-50.5	11.0						washed
-51.7	12.2		Fine silty quartz sand, dark gray, 85% quartz, 15% shell fragments. (SM)	30		3" SAMPLER	
-52.7	13.2				3	-52.7	12.5
			NOTE: Soils are field visually classified in accordance with the Unified Soils Classification System. Blow counts using a 3 inch (I.D.) sampler, 5 feet long, driven with a 300 pound hammer, 18 inch drop, SAMPLE ELEVATION LABORATORY CLASSIFICATION -39.5/-44.5 (SP-SM) -44.5/-49.5 (SP-SM) -51.7/-52.7 (SM-SM) NOTE: * Visual classification based on Gradation Curve. No Atterbert Limits.				15
							17.5
							20
							22.5

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SECTION 01270

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PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.1.1 BID ITEM NO. 0001: MOBILIZATION AND DEMOBILIZATION

Payment will be made for costs associated with or incidental to mobilization and demobilization and establishment of initial project management and coordination. See Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

1.1.2 BID ITEM NO. 0005: SEA TURTLE TRAWLING AND RELOCATION MOBILIZATION AND DEMOBILIZATION

Payment will be made for costs associated with or incidental to mobilization and demobilization for sea turtle trawling and relocation, only upon implementation of this Bid Item. If performance of this Bid Item is not required and implemented per Note (5) of the Bidding Schedule, no payment will be made to the Contractor for this Bid Item.

1.1.3 BID ITEM NO. 0007~~6~~: ENDANGERED SPECIES MONITORING

Payment will be made for costs associated with or incidental to endangered species observers and monitoring. See Section 01410 ENVIRONMENT PROTECTION.

1.1.4 BID ITEM NO. 0008~~7~~: TURBIDITY AND DISPOSAL MONITORING

Payment will be made for costs associated with or incidental to obtaining, analyzing, reporting the results of monitoring for turbidity and disposal operations. See Section 01411 TURBIDITY AND DISPOSAL MONITORING.

1.2 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price

items.

1.2.1 BID ITEM NOS. 0002, 0003 and 0004: EXCAVATION, UNCLASSIFIED

1.2.1.1 Payment

a. Payment will be made for costs associated with or incidental to excavation, transportation, and disposal of materials; providing and maintaining access to the work site(s) and disposal area(s); removal of utility cable; noise control; debris removal; and installation, operation or maintenance of the electronic tracking system for surveillance of all dredging and disposal activities.; ~~nearshore disposal area marking; and, monitoring sea turtles.~~ See Sections 02325 DREDGING. ~~and 01410 ENVIRONMENT PROTECTION.~~

b. Insofar as consistent with the paragraph CONTINUITY OF WORK of Section 00800 SPECIAL CONTRACT REQUIREMENTS, monthly partial payments will be based on approximate quantities determined by soundings or sweepings performed by the Contractor behind the dredge. The term "area designated by the Contracting Officer" as used in the CONTINUITY OF WORK paragraph, is defined as "acceptance section".

c. Soundings for payment purposes shall be made by the Government at the frequency listed in the Channel Survey Notes on the contract drawings.

1.2.1.2 Measurement

a. The maps and/or drawings already prepared (paragraph CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS of Section 00800 SPECIAL CONTRACT REQUIREMENTS) are believed to represent accurately average existing conditions, but the depths shown thereon may be verified and corrected by soundings taken before dredging. Determination of quantities removed and the deductions made therefrom to determine quantities by place measurement to be paid for in the area specified, after having once been made, will not be reopened, except on evidence of collusion, fraud, or obvious error.

b. The total amount of material removed, and to be paid for under the contract, will be measured by the cubic yard in place and quantities determined by the average end area method. The volume computed shall be between the bottom surface shown by soundings taken within 3 weeks before dredging and the bottom surface shown by the soundings taken within 3 weeks after the work specified in each acceptance section indicated on the drawings has been completed. The Contractor shall give 3 weeks advance notice, in writing, to the Contracting Officer's Representative of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section. The quantity shall include the volume within the limits of the side slopes described in subparagraph "Side Slopes" of paragraph REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SIDE SLOPES of Section 02325 DREDGING, less any deductions that may be required for misplaced material described in subparagraph "Misplaced Materials" of paragraph DISPOSAL OF EXCAVATED MATERIAL of Section 02325 DREDGING.

1.2.1.3 Unit of Measure

Cubic yard.

1.2.2 BID ITEM NO. 00065: SEA TURTLE TRAWLING AND RELOCATION

~~All costs associated with mobilization and demobilization for sea turtle trawling and relocation and all costs for sea turtle trawling and relocation shall be included in the contract unit price per day for Bid Item 00065, "SEA TURTLE TRAWLING AND RELOCATION" (hopper dredges only), of the Section 00010 BIDDING SCHEDULE. If performance of this Bid Item is not required and implemented per Note (5) of the Bidding Schedule, no payment will be made to the Contractor for this Bid Item. See Section 01410 ENVIRONMENT PROTECTION.~~

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

(ER 415 1-10)

DACW17-01-B-0018

01000

Kings Bay, GA and Fernandina Harbor, FL, MD, 46-Ft Proj., Cut-1N

CONTRACTOR

[illegible]

(ER 415 1-10)

DACW17-01-B-0018

	SPECIFICATION SECTION
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01410

Kings Bay, GA and Fernandina Harbor, FL, MD, 46-Ft Proj., Cut-1N

CONTRACTOR

[illegible]

SUBMITTAL REGISTER
(ER 415 1-10)

CONTRACT NO.
DACW17-01-B-0018

TITLE AND LOCATION

Kings Bay, GA and Fernandina Harbor, FL, MD, 46-Ft Proj., Cut-1N

CONTRACTOR

SPECIFICATION SECTION
01411

ACTIVITY NO	TRANS-MITTAL NO.	ITEM NO	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL												CLASSI- FICATION		REVIEWER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
					DRAWINGS	INSTRUMENTS	SCHEMATIC	STATION	REFLECTOR	CERTIFICATE	SAMPLING	RECONSTRUCTION	O&M	INFORMATION	GOVERNMENT	SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY		CODE	DATE	SUBMIT TO GOVERN- MENT	CODE	DATE				
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.	aa.		
			1.2	Calibration Standard			X								X													
			1.2	Turbidity Monitoring						X					X													

(ER 415 1-10)

DACW17-01-B-0018

02325

CONTRACTOR

Kings Bay, GA and Fernandina Harbor, FL, MD, 46-Ft Proj., Cut-1N

[illegible]

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SECTION 01410

ENVIRONMENT PROTECTION

PART 1 GENERAL

1.1 SCOPE

This section covers prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other Technical Requirements of these specifications. For the purpose of this specification, environmental damage is defined as the presence of hazardous, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; affect other species, biological communities, or ecosystems; or degrade the quality of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 REFERENCES

1.2.1 Miscellaneous Environmental Laws And Regulations

There are numerous environmental laws and regulations. At the Federal level, the applicable laws and regulations include compliance with the Clean Water Act (CWA); Clean Air Act (CAA); Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Marine Protection, Research, and Sanctuaries Act (MPRSA); National Environmental Policy Act (NEPA); National Historic Preservation Act (NHPA); National Pollution Discharge Elimination System (NPDES); Research and Sanctuaries Act; Native American Graves Protection and Repatriation Act (NAGPRA); Resource Conservation and Recovery Act (RCRA); Rivers and Harbors Act (R&H); Safe Drinking Water Act (SDWA); Toxic Substance Control Act (TSCA); Wild and Scenic Rivers Act (WSRA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Code of Federal Regulations (CFRs); Executive Orders; and, Environmental Protection Agency (EPA) requirements. NEPA compliance measures specified in an Environmental Assessment (EA) or Environmental Impact Statements (EIS) are also applicable with regard to compliance.

1.2.2 Publication Reference(s)

The publication(s) listed below form(s) a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

EM 385-1-1	(1996) Safety and Health Requirements
EM 1110-1-1003	(1996) NAVSTAR Global Positioning System Surveying

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

1.4 PERMITS AND AUTHORIZATIONS

The Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) and authorization(s) obtained by the Corps of Engineers listed below. These permit(s) and authorization(s) are available for review by contacting the Jacksonville District, Programs and Project Management Division at 904-232-3729.

a. Florida Department of Environmental Protection
Permit No. 452025139;
Effective Date: 30 December 1992;
Expiration Date: 30 December 2002.

b. Department of Army Permit No. 199403800;
Issue Date: 20 December 1995;
Expiration Date: 31 January 2005.

c. Department of Army Permit No. 199201854;
Issue Date: 18 December 1998;
Expiration Date: 15 December 2001.

d. NMFS Regional Biological Opinion on Hopper Dredging along the South Atlantic coast; Dated: 25 September 1997.

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Turtle Deflector Device; G|CO.

Because this contract requires the use of a hopper dredge for this work, detail drawings shall be submitted showing the proposed device and its attachment to the Contractor's equipment. Contractor's drawings to be submitted shall include the approach angle for any and all depths to be dredged during this contract. A copy of the approved drawings and calculations shall be available on the vessel during the life of this contract. No dredging work shall be allowed to commence until approval of the turtle deflector device.

SD-08 Statements

Qualifications; FIO.

The Contractor shall submit a certified copy of Florida Fish and Wildlife Conservation Commission (FF&WCC) permit for handling of sea turtle eggs.

~~Bird Nesting Monitoring Qualifications; G|PD.~~

~~Within 20 calendar days after the date of Notice of Award, the Contractor shall furnish to the Contracting Officer for approval, the qualifications of the bird monitor/observer. Appropriate qualifications for bird monitor/observer shall be a demonstrated ability to find and/or identify bird species, nesting behavior, eggs and nests, and habitat requirements.~~

~~Environmental Protection Plan; G|PD.~~

Within 1520 calendar days after the date of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan no later than 30 calendar days after receipt of Notice to Proceed. Approval of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. Approval of the plan is conditional and predicated on satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes to the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The Environmental Protection Plan shall include but not be limited to the following:

- a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.
- b. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.
- c. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.
- d. A permit or license for and the location of the solid waste disposal area.
- e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossing, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.
- f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.
- g. Traffic control plan.

- h. Methods of protecting surface and ground water during construction activities.
- i. Spill prevention. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions to be taken to meet Federal, State, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.
- j. Spill contingency plan for hazardous, toxic, or petroleum material.
- k. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- l. Plan of borrow area(s).
- m. A statement as to the person who shall be responsible for implementation of the Environmental Protection Plan. The Contractor personnel responsible shall report directly to the Contractor's top management and shall have the authority to act for the Contractor in all environmental protection matters.
- n. Recycling and waste management plan. Executive Order 12873 of 20 October 1993 requires a number of considerations in planning a project. Fallen trees should not be burned or buried. Mulching, composting, and other uses for trees should be considered. Also, recovery of metals at the job site, including aluminum cans, should be considered with proceeds to be retained by the Contractor. Non-Federal recycling and waste minimization efforts shall also be incorporated into this plan.
- o. Appendices (permits and Ocean Dredged Material Disposal Site Monitoring and Management Plan if applicable). A copy of all permits (and Ocean Dredged Material Disposal Site Monitoring and Management Plans) applicable to the project shall be attached as appendices to the Environmental Protection Plan.
- p. Operational plan to achieve protection of sea turtles during hopper dredge(s) operation.
- ~~q. Steps to be taken to construct the dike in such a manner as not to impact migratory birds or induce their nesting.~~

SD-18 Records

Logs/Final Summary Report; FIO.

Contractor shall submit as specified, logs and final summary report of sightings and incidents with endangered species.

Project Environmental Summary Sheet; FIO.

Contractor shall submit within 30 days following completion of the project, a written report of the absence or occurrence of environmental incidents. In addition, for construction activities whose anticipated duration is more

than one calendar year, the Contractor shall complete a sheet each May 31st (plus/minus 14 days).

Logs/Summary of Monitoring; FIO.

Contractor shall submit as specified, logs and summary of monitoring detailing nesting and nesting success.

Hopper Dredge(s) Recording Chart(s); FIO.

Contractor shall submit as specified, a copy of the hopper dredge(s) output recording chart(s) for each day's operation on a daily basis.

1.6 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors shall be the responsibility of the Contractor.

1.7 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State, or local laws or regulations, permits and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

Additionally, the Contractor shall notify the Authorized Contracting Officer's Representative (ACOR), in writing, of the absence or occurrence of environmental incidents, as required on the Project Environmental Summary Sheet, copy appended to the end of this Section. (Refer to paragraph SUBMITTALS above.)

1.8 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and careful installation and monitoring of the project to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the Contractor.

Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with Section 01451 CONTRACTOR QUALITY CONTROL.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

For contract work, the Contractor shall comply with all applicable Federal, State, or local laws and regulations. The environmental resources within

the project boundaries and those affected outside the limits of permanent work under this contract shall be protected at least during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Deviations from drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, and alternate access routes) could result in the need for the Government to reanalyze and re-approve the project from an environmental standpoint. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 General Project Environmental Design and Installation Criteria

Some project sites have features that shall not be impacted in any way, including cultural, historic, or archeological features. At all sites, project plans should minimize disturbance to existing features at the site to the extent possible, including vegetative, topographic, and drainage pattern features. Wetland impacts (temporary access, detours, staging areas, and other work area impacts) to project sites should be avoided and may require separate permitting action. Any wetlands temporarily impacted shall have its soil restored upon project completion. Expansion of previously permitted project footprints may likewise require separate permitting action.

In all cases, the design and/or installation of project system shall provide for protection of the environment during handling, installing, storing, utilizing, transporting, servicing, testing, refilling, transferring, pumping, processing, removing waste products, repairing and maintaining systems and their components. Necessary design protection shall also be considered that would prevent contamination of the environment from impacts to the system caused by storm water runoff and flooding. Retrofit of connected systems on project sites to modern environmental protection design standards shall also be considered.

In the event environmental protection measures fail, the Contractor shall implement procedures to control and correct environmental damage.

3.1.1.1 Petroleum-Based Systems Environmental Design and Installation Criteria

For petroleum-based systems, a statement of site suitability shall be provided and shall include what would be necessary to prevent adverse impact to water quality; natural resources; habitat; historic, cultural, and archeological sites; and fragile local resources in the event of a fuel spill. Human error and mechanical/electrical failure of components without human intervention shall also be considered in the design with regard to spills. Additionally, appropriate noise and emissions controls shall be incorporated into the design, including vapor and exhaust controls.

At a minimum, environmental protection design requirements shall also include the following: (1) stationary tanks and piping shall have secondary containment features; (2) approved materials and corrosion protection systems shall be utilized; (3) system leaks shall be readily detected and contained without human intervention; and, (4) overfill containment systems shall be provided.

Applicable Federal, State, and local codes and requirements shall be strictly adhered to in the design, including those of the U.S. Environmental Protection Agency (EPA), the State of Florida, and other local governing agencies such as those of counties and municipalities. In

the case of the State, requirements include Chapter of the Florida Administrative Code (FAC) such as 62-17 (Approved Materials), 62-252 (Vapor Emissions), 62-296 (Emissions), 62-761 (Underground Storage Tanks), and 62-762 (Aboveground Tanks). Note that Chapters 62-761 and 62-762 of the FAC may be combined into one Chapter. Best Management Practices from the applicable agencies shall also be adhered to in the design.

3.1.1.2 Sewage-Based Systems Environmental Design and Installation Criteria

In general, there shall be no waste or debris discharges of any kind for a project unless authorized by the Contracting Officer. This shall include the Contractor's providing sufficient temporary sanitary equipment and facilities for the project. The design and/or installation of temporary or permanent sewage systems shall ensure that waters will be free of effects of sewage discharges. Applicable Federal, State, or local codes and requirements regarding sewage shall be strictly adhered to in the design, such as those of the EPA and, in the case of the State, Chapter 62-620 (Wastewater Facilities) of the FAC. Best Management Practices from the applicable agencies shall also be adhered to in the design.

3.1.2 Protection of Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved or avoided within the Contractor's work area. Materials displaced into uncleared areas shall be removed. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. The Contractor shall protect from damage all existing trees designated to remain. Protection of tree roots shall be provided against noxious materials in solution caused by run-off or spillage. Fires shall be located outside the canopy of protected trees. No materials, trailers, or equipment shall be stored within the drip line of any protected tree. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the U.S. Department of Agriculture (USDA) regarding additional cleaning requirements that may be necessary.

3.1.2.2 Contractor Facilities and Other Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or

as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made when approved by the Contracting Officer. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment. If there is suspicion that sediment may be unsuitable for disposal at a specified location, the Contractor shall immediately take measures to contain the suspect sediment and notify the Contracting Officer.

3.1.2.3 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination.

a. Disposal of Solid Waste by Removal from Government Property. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal.

3.1.2.4 Fuel, Oil, and Lubricants

Fuel, oil, and lubricants shall be managed so as to prevent spills and evaporation. To prevent spills, fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area. Petroleum waste generated shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with 40 CFR 279, State, and local regulations.

3.1.2.5 Hazardous Waste

Hazardous wastes are defined in 40 CFR 261. The Contractor shall ensure that hazardous wastes are stored and disposed of in accordance with 40 CFR 261 and State and local regulations. The Contractor shall ensure that hazardous wastes are packed, labeled, and transported in accordance with 49 CFR 173 and State and local regulations.

3.1.2.6 Hazardous Materials

The Contractor shall ensure that hazardous materials are labeled, stored, and transported in accordance with 49 CFR 173, State, and local regulations.

3.1.2.7 Disposal of Other Materials

Other materials than previously discussed (Construction and Demolition, vegetative waste, etc.) shall be handled as directed.

3.1.3 Preservation and Recovery of Historic, Archeological, and Cultural

Resources

3.1.3.1 Identified Cultural Resource

A submerged cultural resource has been identified near the dredge area, referenced on Sheet 2/2. In accordance with consultation with the State Historic Preservation Officer, a 300 foot exclusion buffer is provided for this resource. No dredging activities, including anchoring, will occur within this exclusion buffer.

3.1.3.2 Inadvertent Discoveries

If, during or other construction activities, the Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to the Contracting Officer so that the appropriate Corps staff may be notified and a determination for what, if any, additional action is needed. Examples of historic, archeological and cultural resources are bones, remains, artifacts, shell, midden, charcoal or other deposits, rocks or coral, evidences of agricultural or other human activity, alignments, and constructed features. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from further removing, or otherwise damaging, such resources.

The possibility of encountering submerged cultural resources is inherent in dredging and snagging operations. Such findings could include shipwrecks, shipwreck debris fields (such as streamed engine parts), prehistoric watercraft (such as log "dugouts"), and other structural features intact or displaced. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. Suspected cultural materials inadvertently gathered from a water-saturated context should be kept moist by re-immersion, spraying, or some other expedient means of wetting until the appropriate Corps staff provide further directives. No interviews or other contact with media shall occur without clear authorization from the Contracting Officer or the appropriate Corps representative.

3.1.3.3 Claims for Downtime due to Inadvertent Discoveries

Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident, such delays shall be coordinated with the Contracting Officer.

3.1.4 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface, ground waters, and wetlands. The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. The Contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. There shall be no storage or stockpiling of equipment, tools,

or materials within wetlands or along the shoreline within the littoral zone unless specifically authorized.

3.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water. Analysis shall be performed and results reviewed and approved by Corps staff before water in retention ponds is discharged.

3.1.4.2 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.1.4.3 Turbidity

The Contractor shall conduct his dredging and disposal operations in a manner to minimize turbidity. See Section 01411 TURBIDITY MONITORING for further instructions on turbidity.

3.1.4.4 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

The Contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, local bodies of water, or wetlands. This shall be accomplished by design and procedural controls. In the event that a spill occurs despite the design and procedural controls, the following shall occur:

- (1) Immediate action shall be taken to contain and cleanup any spill of oil, fuel or other hazardous substance.
- (2) Spills shall be immediately reported to the Contracting Officer.
- (3) Spill contingency planning shall be strictly in accordance with the criteria of 40 CFR, Part 109.
- (4) To control the spread of any potential spill, absorbent materials shall be readily available and capable of absorbing the contents of the single largest tank.
- (5) To control the spread of any potential spill, the Contractor shall provide a written certification of commitment of manpower, equipment, and materials required to expeditiously cleanup and dispose of spill materials.

a. Spill Preventive Systems

System design and installation requirements have been discussed at the beginning of this Section. Temporary or portable tanks shall conform to applicable Federal, State, and local codes and requirements and shall not be placed where they may be affected by storm, flooding, or washout. Diversionary structures for spills shall be put in place in advance where practical. Both spill preventive systems and any deviations from associated requirements must be approved by the Contracting Officer prior

to implementation.

b. Liabilities

The Contractor shall be liable in the amounts established in 40 CFR, Part 113 when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. The penalty for failure to report the discharge of oil shall be in accordance with the provision of 33 CFR, Part 153.

3.1.5 Protection of Fish and Wildlife Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.

3.1.5.1 Endangered Species Protection

The Contractor shall instruct all personnel associated with the project of the potential presence of manatees, sea turtles, and whales in the area, and the need to avoid collisions with or harming these animals. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, sea turtles, or whales which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The Contractor shall be held responsible for any manatee, sea turtle, or whale harmed, harassed, or killed as a result of construction activities. The Contractor shall be held responsible and liable for any of the above-mentioned animals that are harmed, harassed, or killed as a result of construction activities. In the event that a threatened or endangered species is harmed as a result of construction activities, the Contractor shall cease all work and notify the Contracting Officer's Representative.

a. Siltation Barriers. If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

ab. Special Operating Conditions

(1) All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom, and vessels shall follow routes of deep water whenever possible. Boats used to transport personnel shall be shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits. Mooring bumpers shall be placed on all barges, tugs, and similar large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet.

(2) If a manatee(s) is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the Contractor to ensure protection of the manatee. These precautions

shall include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease within the waterway to ensure protection of the manatee. Construction activities shall not resume until the manatee has departed the project area.

(13) During the period December through March, hopper dredges moving through the designated critical habitat of the right whale (*Eubalaena glacialis*) shall take the following precautions. During evening hours or when there is limited visibility due to fog or sea states greater than Beaufort 3, the dredge operator shall slow down to 5 knots or less when traversing between areas if whales have been spotted within 15 nautical miles (nm) of the vessel's path within the previous 24 hours. In addition, the dredge operator shall maintain a ~~500~~750-yard buffer between the vessel and any whale. The area designated as critical habitat in the southeastern United States encompasses waters between 31°45'N (approximately located at the mouth of the Altamaha River, GA) and 30°45'N (approximately Jacksonville, FL) from the shoreline out to 15 nm offshore; and the waters between 30°45'N and 28°00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nm.

During the period from 1 December through 30 March, daily aerial surveys within 15 nautical miles of the dredging and disposal sites will be conducted by others to monitor for the presence of right whales. Right whale sightings will be communicated by marine radio to the Contractor's dredge.

(4) Dredging operations shall cease if three turtles are taken until the COR notifies the Contractor to resume dredging.

c. Manatee Signs. Prior to commencement of construction, each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8-1/2" X 11" reading, "CAUTION: MANATEE HABITAT/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA." In the absence of a vessel, a temporary 3' X 4' sign reading, "CAUTION: MANATEE AREA" shall be posted adjacent to the issued construction permit. A second temporary sign measuring 8-1/2" X 11" reading, "CAUTION: MANATEE HABITAT. EQUIPMENT MUST BE SHUT DOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION." shall be posted at the dredge operator control station and at a location prominently adjacent to the issued construction permit. The Contractor shall remove the signs upon completion of construction. Sample Manatee Caution Signs are appended to the end of this Section.

3.1.5.2 Endangered Species Observers (Hopper Dredge Only)

During dredging operations, an observer approved by the National Marine Fisheries Service (NMFS) for sea turtles, whales, and manatees shall be aboard to monitor for the presence of the species. During transit to and from the disposal area, the observer shall monitor from the bridge during daylight hours for the presence of whales, especially the right whale, during the period December through March. During dredging operations, the observer shall monitor the inflow screening for turtles and/or turtle parts.

a. Observation Sheets. The results of the monitoring shall be recorded on the appropriate observation sheet. An observation sheet

shall be completed for each dredging cycle whether or not sea turtle or sea turtle parts are present. Sample observation sheets are appended to the end of this Section.

b. Endangered Species Observer(s). NMFS-approved firms shall provide and manage the endangered species observer(s). A list of acceptable firms can be obtained by contacting NMFS (Mr. ~~Charles Oravetz~~Eric Hawk) in St. Petersburg, Florida at 727-570-5312. The trained observer(s) shall require quarters on board the dredge.

3.1.5.3 Manatee, Sea Turtle, and Whale Sighting Reports

Any collisions with a manatee, sea turtle, or whale or sighting of any injured or incapacitated manatees, sea turtles, or whales shall be reported immediately to the Corps of Engineers. The order of contact within the Corps of Engineers shall be as follows:

Order of Contact of Corps Personnel for Dredging Contractor to Report Endangered Species Death or Injury

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector	On site	Lodging Location
Mr. Russ Tolle, Area Engineer, North Florida Area Office (CESAJ-CO-N)	904-232-2086	To be Provided
Acting Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-1685	To be Provided
Mr. Charles McGehee, Chief, Construction Branch, Construction-Operations Division (CESAJ-CO-C)	904-232-1122	To be Provided
Mr. Gordon M. Butler, Jr., Chief, Construction-Operations Division (CESAJ-CO)	904-232-3765	To be Provided

The Contractor shall also immediately report any collision with and/or injury to a manatee to the Florida Marine Patrol "Manatee Hotline" 1-800-342-5367 as well as the U.S. Fish and Wildlife Service, Jacksonville Field Station 904-232-2580 for North Florida.

3.1.5.4 Disposition of Turtles or Turtle Parts

Positively identified turtle parts shall be disposed of as solid waste ~~at the disposal site(s)~~. Turtle parts which cannot be positively identified on board the dredge or barge(s) shall be preserved by the observer(s) for later identification. Observer(s) shall measure, weigh, tag, and release any uninjured turtles incidentally taken by the dredge. Observer(s) (or their authorized representative) shall transport, as soon as possible, any injured turtles to a rehabilitation facility such as Sea World at Orlando, Florida.

3.1.5.5 Report Submission

The Contractor shall maintain a log detailing all incidents, including sightings, collisions with, injuries, or killing of manatees, sea turtles,

or whales occurring during the contract period. The data shall be recorded on forms provided by the Contracting Officer (sample forms are appended to the end of this Section). All data in original form shall be forwarded directly to Chief, Environmental Branch, P. O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of collection and copies of the data shall be supplied to the Contracting Officer. Following project completion, a report summarizing the above incidents and sightings shall be submitted to the following:

Florida Fish and Wildlife Conservation Commission
Bureau of Protected Species Management
620 South Meridian Street
Tallahassee, Florida 32399-1600

Acting Chief, Environmental Branch
U.S. Army Corps of Engineers (CESAJ-PD-E)
P.O. Box 4970
Jacksonville, Florida 32232-0019

Mr. Russ Tolle, Area Engineer, North Florida Area Office
U.S Army Corps of Engineers (CESAJ-CO-N)
Suite 201
4070 Boulevard Center Drive
Jacksonville, Florida 32207-3474

U.S. Fish and Wildlife Service
6620 Southpoint Drive South, Suite 310
Jacksonville, Florida 32216-0912

National Marine Fisheries Service
Protected Species Management Branch
9721 Executive Center Drive
St. Petersburg, Florida 33702

3.1.5.6 Hopper Dredge Equipment

Hopper dredge drag heads shall be equipped with rigid sea turtle deflectors which are rigidly attached. No dredging shall be performed by a hopper dredge without a turtle deflector device that has been approved by the Contracting Officer. (Sample Turtle Deflector Design Details are appended to the end of this Section.)

a. Deflector Design

(1) The leading vee-shaped portion of the deflector shall have an included angle of less than 90 degrees. Internal reinforcement shall be installed in the deflector to prevent structural failure of the device. The leading edge of the deflector shall be designed to have a plowing effect of at least 6" depth when the drag head is being operated. Appropriate instrumentation or indicator shall be used and kept in proper calibration to insure the critical "approach angle". (Information Only Note: The design "approach angle" or the angle of lower drag head pipe relative to the average sediment plane is very important to the proper operation of a deflector. If the lower drag head pipe angle in actual dredging conditions varies tremendously from the design angle of approach used in the development of the deflector, the 6" plowing effect does not occur. Therefore, every effort should be made to insure this design "approach angle" is

maintained with the lower drag pipe.)

(2) If adjustable depth deflectors are installed, they shall be rigidly attached to the drag head using either a hinged aft attachment point or an aft trunnion attachment point in association with an adjustable pin front attachment point or cable front attachment point with a stop set to obtain the 6" plowing effect. This arrangement allows fine-tuning the 6" plowing effect for varying depths. After the deflector is properly adjusted there shall be NO openings between the deflector and the drag head that are more than 4" by 4".

b. In Flow Basket Design

(1) The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4" x 4" openings. The method selected shall depend on the construction of the dredge used and shall be approved by the Contracting Officer's Representative prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s). The screens and/or baskets shall remain in place throughout the performance of the work.

(2) The Contractor shall install and maintain floodlights suitable for illumination of the baskets or screening to allow the observer to safely monitor the hopper basket(s) during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow baskets or screens to allow the observer to inspect for turtles, turtle parts or damage.

(3) The turtle deflector device and inflow screens shall be maintained in operational condition for the entire dredging operation.

c. Hopper Dredge Operation

(1) The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles and to comply with the requirements stated in the Incidental Take Statement provided by the National Marine Fisheries Service in their Biological Opinion.

(2) When initiating dredging, suction through the drag heads shall be allowed just long enough to prime the pumps, then the drag heads must be placed firmly on the bottom. When lifting the drag heads from the bottom, suction through the drag heads shall be allowed just long enough to clear the lines, and then must cease. Pumping water through the drag heads shall cease while maneuvering or during travel to/from the disposal area.

(Information Only Note: Optimal suction pipe densities and velocities occur when the deflector is operated properly. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency which reduces total dredging hours and "turtle takes." The operation of a drag head with teeth must be monitored for each dredged section to insure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators should configure and operate their equipment to

eliminate all low level suction velocities. Pipe plugging in the past was easily corrected, when low suction velocities occurred, by raising the drag head off the bottom until the suction velocities increased to an appropriate level. Pipe plugging **cannot** be corrected by raising the drag head off the bottom. Arrangements of teeth and/or the reconfiguration of teeth should be made during the dredging process to optimize the suction velocities.)

(3) Raising the drag head off the bottom to increase suction velocities is not acceptable. The primary adjustment for providing additional mixing water to the suction line should be through water ports. To insure that suction velocities do not drop below appropriate levels, the Contractor's personnel shall monitor production meters throughout the job and adjust primarily the number and opening sizes of water ports. Water port openings on top of the drag head or on raised stand pipes above the drag head shall be screened before they are utilized on the dredging project. If a dredge section includes sandy shoals on one end of a tract line and mud sediments on the other end of the tract line, the Contractor shall adjust the equipment to eliminate drag head pick-ups to clear the suction line.

(4) Near the completion of each payment section, the Contractor shall perform sufficient surveys to accurately depict those portions of the acceptance section requiring cleanup. The Contractor shall keep the drag head buried a minimum of 6 inches in the sediment at all times. Although the over depth prism is not the required dredging prism, the Contractor shall achieve the required prism by removing the material from the allowable over depth prism.

(5) During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.

(6) Dredging operations shall cease if three turtles are taken until the COR notifies the Contractor to resume dredging.

~~(67)~~ These operational procedures are intended to stress the importance of balancing the suction pipe densities and velocities in order to keep from taking sea turtles. The Contractor shall develop a written operational plan to minimize turtle takes and submit it as part of the Environmental Protection Plan.

~~(78)~~ The Contractor must comply with all requirements of this specification and the Contractor's accepted Environmental Protection Plan. The contents of this specification and the Contractor's Environmental Protection Plan shall be shared with all applicable crew-members of the hopper dredge.

3.1.5.7 Recording Charts for Hopper Dredge(s)

All hopper dredge(s) shall be equipped with recording devices for each drag head that capture real time, drag head elevation, slurry density, and at least two of the following: Pump(s) slurry velocity measured at the output side, pump(s) vacuum, and/or pump(s) RPM. The Contractor shall record continuous real time positioning of the dredge, by plot or electronic means, during the entire dredging cycle including dredging area and

disposal area. Dredge location accuracy shall meet the requirements of the latest version of EM 1110-1-1003. A copy of the EM can be downloaded from the following web site:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. The recording system shall be capable of capturing data at variable intervals but with a frequency of not less than every 60 seconds. All data shall be time correlated to a 24 hour clock and the recording system shall include a method of daily evaluation of the data collected. Data shall be furnished to the Contracting Officer's Representative for each day's operation on a daily basis. A written plan of the method the Contractor intends to use in order to satisfy these requirements shall be included with the Contractor's Quality Control Plan.

3.1.5.8 Sea Turtle Trawling and Relocation (For Hopper Dredges Only)

a. Sea Turtle Risk Assessment and Relocation. A sea turtle risk assessment survey shall be conducted following the take of three sea turtles and continue until directed by the Contracting Officer. The results of each trawl shall be recorded on Sea Turtle Trawling Report appended to the end of this Section. A final report shall be prepared and submitted to the Contracting Officer's Representative prior to re-commencement of dredging summarizing the results of the survey (with all forms and including total trawling times, number of trawls and number of captures). Any turtles captured during the survey shall be measured and tagged in accordance with standard biological sampling procedures with sampling data recorded on Sea Turtle Tagging and Relocation Report appended to the end of this Section. Any captured sea turtles shall be relocated south of the work area at least 3 miles from the location recorded on the Sea Turtle Tagging and Relocation Report form.

b. Sea Turtle Trawling Procedures. An approved sea turtle trawling and relocation supervisor shall provide researchers and nets to capture and relocate sea turtles, shall conduct Sea Turtle Risk Assessment Survey, and shall conduct any initiated sea turtle trawling. Turtles shall be captured with trawl nets to determine their relative abundance in the channel during dredging. Methods and equipment shall be standardized including data sheets, nets, trawling direction to tide, length of station, length of tow, and number of tows per station. Data on each tow shall be recorded using Sea Turtle Trawling Report appended to end of this Section. The trawler shall be equipped with two 60-foot nets constructed from 8-inch mesh (stretch) fitted with mud rollers and flats as specified in Turtle Trawl Nets Specifications appended to the end of this Section. Paired net tows shall be made for 10 to 12 hours per day or night. Trawling shall be conducted with the tidal flow using repetitive 15-30 minute (total time) tows in the channel. Tows shall be made in the center, green and red sides of the channel such that the total width of the channel bottom is sampled. Positions at the beginning and end of each tow shall be determined from GPS Positioning equipment. Tow speed shall be recorded at the approximate midpoint of each tow. Refer to EM 1110-1-1003, paragraph 5.3 and Table 5-1, for acceptable GPS criteria.

c. Water Quality and Physical Measurements. Water temperature measurements shall be taken at the water surface each day using a laboratory thermometer. Weather conditions shall be recorded from visual observations and instruments on the trawler. Weather conditions, air temperature, wind velocity and direction, sea state-wave height, and precipitation shall be recorded on the Sea

Turtle Trawling Report appended to the end of this Section. High and low tides shall be recorded.

d. Initiation of Trawling. Initiate trawling if three turtles are taken. The Contractor must initiate trawling and relocation activity in the dredging area within 8 hours of the occurrence of the take. Trawling shall continue until suspended by the Contracting Officer's Representative.

e. Approved Trawling Supervisor. Trawling shall be conducted under the supervision of a biologist approved by the NMFS. A letter of approval from NMFS shall be provided to the Contracting Officer's Representative prior to commencement of trawling.

f. Turtle Excluder Devices. Approval for trawling for sea turtles without Turtle Excluder Devices (TEDs) must be obtained from NMFS. Approval for capture and relocation of sea turtles must be obtained from the Florida Fish and Wildlife Conservation Commission (FF&WCC). Approvals must be submitted to the Contracting Officer's Representative prior to trawling.

g. Report Submission. Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer, North Florida Area Office, within 10 working days.

3.1.5.9 Sea Turtle Beach Nest Monitoring

a. Sea Turtle (Work Stoppage) Window and Monitoring. If dredging and placement of material in the beach fill area along Florida Beaches has commenced on or before March 1st, turtle monitoring and nest location shall commence on March 1st and continue concurrently with the performance of work. If dredging and placement of material on Florida Beaches has not commenced prior to March 1st, the Contractor shall commence turtle monitoring and nest location activities for a period of 65 days prior to performing any work (including movement of equipment) in the beach fill area or start on March 1st, whichever date is later. In such case, after turtle monitoring and nest location activities have been performed for a period of 65 days, the Contractor shall commence work in the beach fill area and continue the monitoring activities concurrently with performance of the work. In any case turtle monitoring and nest location/relocation activities are required through November 30th or until completion of the work on Florida Beaches, whichever is earlier.

b. Daily Visual Inspection/Hopper Dredge Reporting Log. Turtle monitoring activities shall include performance of daily visual inspections of the beach at sunrise by a person permitted by the FF&WCC for handling sea turtle eggs. Any nests discovered shall be excavated and relocated prior to 9:00 a.m. to a nearby self-release beach location where artificial lighting and/or other disturbances shall not interfere with successful incubation, hatching nor hatchling orientation. A log of the results of turtle egg monitoring and recovery activities shall be kept and a copy submitted weekly to the Chief, Environmental Branch, Jacksonville District (sample Marine Turtle Nesting Summary Report form is appended to the end of this Section).

c. Turtle Subcontractor. The Contractor shall have a FF&WCC permitted

subcontractor approved by the Contracting Officer to accomplish the sea turtle monitoring of this section unless he demonstrates to the satisfaction of the Contracting Officer the capability to accomplish sea turtle monitoring and recovery by obtaining a permit from the FF&WCC to take turtles.

d. Report Submission. Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer, North Florida Area Office.

3.1.5.10 Beach Placement Restrictions

a. Equipment Lighting During Sea Turtle Nesting Period [~~April 15~~ March 1 to November 30]

Direct lighting of the beach and near shore waters shall be limited to the immediate construction area and shall comply with safety requirements. Lighting on offshore or onshore equipment shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the waters surface and nesting beach while meeting all Coast Guard, EM 385-1-1, and OSHA requirements.

b. Pipeline Placement

Any construction pipes placed parallel to the shoreline shall be placed as far landward as possible up to the vegetated dune line.

c. Beach Tilling

Till the fill area between the landward edge and the seaward edge of the top of the berm with equipment operated so as to penetrate and loosen beach sand (a) to a depth of 36 inches and (b) laterally without leaving unloosened compact sand between the adjacent paths of tines or penetrating part of the equipment. (Suitable equipment is Caterpillar D9L/No. 9 Adjustable Parallelogram Multishank Ripper, or equal.)

3.1.5.11 Escarpments

Visual surveys for escarpments along the project area shall be made immediately after completion of the beach placement. The Contractor shall perform daily visual surveys for escarpments along finished sections of the beach placement area that have not been accepted by the Contracting Officer as complete. Results of the surveys shall be submitted to the Contracting Officer. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet or more shall be mechanically leveled by the Contractor to the natural beach contour. ~~Once a beach section is accepted by the Contracting Officer as complete, the County Department of Environmental Resources Management (DERM) will take over the responsibility for visual surveys and escarpment removal.~~

3.1.6 Protection of Air Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of Florida (Florida Statute, Chapter 403 and others and Chapters 200 series of

the FAC) and all Federal emission and performance laws and standards, including the U.S. Environmental Protection Agency's Ambient Air Quality Standards. Information regarding Florida Statutes can be obtained from the following websites:

<http://www.dep.state.fl.us/ogc/documents/statutes/text/403.doc>;

<http://www.dep.state.fl.us/ogc/documents/rules/aiur/62-213.doc>; and,

<http://www.dep.state.fl.us/ogc/documents/rules/mainrule.htm>.

3.1.6.1 Particulates

Particulates, such as dust, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

3.1.6.2 Odors

Odors shall be controlled at all times for all construction activities.

3.1.7 Protection of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise.

3.2 POSTCONSTRUCTION CLEANUP

The Contractor shall clean up any area(s) used for construction.

3.3 PRESERVATION AND RESTORATION OF LANDSCAPE AND MARINE VEGETATION DAMAGES

The Contractor shall restore all landscape features and marine vegetation damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be a part of the Environmental Protection Plan as defined in subparagraph "Environmental Protection Plan" of paragraph SUBMITTALS above. This work shall be accomplished at the Contractor's expense.

3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.5 SAMPLE - HOPPER DREDGE REPORTING LOG--TURTLE OBSERVER NOTES

See APPENDIX 01410-A at the end of this Section (1 page).

3.6 SAMPLE - INCIDENT REPORT OF SEA TURTLE MORTALITY AND DREDGING ACTIVITIES

See APPENDIX 01410-B at the end of this Section (1 page).

3.7 MARINE TURTLE NESTING SUMMARY REPORT

See APPENDIX 01410-C at the end of this Section (2 pages).

3.8 CONCEPTUAL TURTLE DEFLECTOR DESIGN DETAILS

See APPENDIX 01410-D at the end of this Section (2 pages).

3.9 SEA TURTLE TRAWLING REPORT

See APPENDIX 01410-E at the end of this Section (1 page).

3.10 SEA TURTLE TAGGING AND RELOCATION REPORT

See APPENDIX 01410-F at the end of this Section (1 page).

3.11 TURTLE TRAWEL NETS SPECIFICATIONS

See APPENDIX 01410-G at the end of this Section (1 page).

3.12 SAMPLE - WHALE SIGHTING LOG

See APPENDIX 01410-H at the end of this Section (1 page).

3.13 PROJECT ENVIRONMENTAL SUMMARY SHEET

See APPENDIX 01410-J at the end of this Section (2 pages).

3.14 SAMPLE - MANATEE CAUTION SIGNS

See APPENDIX 01410-K at the end of this Section (2 pages).

3.15 SAMPLE - DAILY MANATEE REPORTING LOG

See APPENDIX 01410-L at the end of this Section (1 page).

-- End of Section --

CAUTION

MANATEE HABITAT

**IDLE SPEED IS REQUIRED IF OPERATING A
VESSEL IN THE CONSTRUCTION AREA.**

**ALL EQUIPMENT MUST BE SHUTDOWN IF A
MANATEE COMES WITHIN 50 FEET OF
OPERATION.**

**ANY COLLISION WITH AND/OR INJURY TO A MANATEE
SHALL BE REPORTED IMMEDIATELY TO THE FLORIDA
MARINE PATROL AT 1-800-DIAL FMP
(1-800-342-5367)**

CAUTION

MANATEE HABITAT

**ALL EQUIPMENT MUST BE SHUTDOWN IF A
MANATEE COMES WITHIN 50 FEET OF
OPERATION.**

**ANY COLLISION WITH AND/OR INJURY TO A MANATEE
SHALL BE REPORTED IMMEDIATELY TO THE FLORIDA
MARINE PATROL AT 1-800-DIAL FMP
(1-800-342-5367)**

DATE: _____

MANATEE REPORTING LOG

1. PROJECT: _____

2. DEP WATER QUALITY CERTIFICATE #: _____

3. MANATEES SIGHTED: YES _____ NO _____

IF "NO", PROCEED TO NO. 10

4. TIME: _____

5. NUMBER OF MANATEES SIGHTED: ADULT _____ JUVENILE _____

6. NUMBER OF MANATEES INJURED:

ADULT _____ JUVENILE _____ WORK RELATED: YES _____ NO _____

7. NUMBER OF MANATEES KILLED:

ADULT _____ JUVENILE _____ WORK RELATED: YES _____ NO _____

8. LOCATION:

9. REMARKS:

10. SIGNATURE: _____

11. TITLE: _____

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SECTION 01411

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SECTION 01411

TURBIDITY AND DISPOSAL MONITORING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all work required to obtain, analyze, and report the results of turbidity ~~and Ocean Dredged Material Disposal Site (ODMDS) disposal~~ monitoring.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Instructions

Calibration Standard; FIO.

The Contractor shall furnish to the Contracting Officer's Representative (COR) a copy of the operating instructions and standards used in calibrating equipment used in collecting samples for turbidity.

SD-09 Reports

Turbidity Monitoring; FIO.

All required turbidity test reports shall be submitted (preferably by electronic mail) to the COR, the Environmental Quality Section (CESAJ-PD-ES), and the Florida Department of Environmental Protection (FDEP) within 24 hours after completion of each test.

~~Disposal Reports; FIO.~~

~~All Ocean Dredged Material Disposal Site (ODMDS) reports shall be submitted to the COR weekly. Pre and post ODMDS bathymetric surveys shall be submitted to the COR within three months prior to start of disposal operations and 30 days following completion of disposal operations.~~

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 MONITORING REQUIREMENTS

3.1.1 General

Nearshore or inland water samples shall be obtained and analyzed for turbidity. Sampling shall be conducted in accordance with techniques described in the latest edition of "Standard Methods" published by the

American Public Health Association (APHA), American Waterworks Association (AWWA), and Water Pollution Control Federation (WPCF), and other current techniques recognized by the scientific community and approved by the Jacksonville District, Corps of Engineers. Samples obtained for turbidity analysis shall be analyzed within 30 minutes of collection. Samples shall be taken with a sampler obtaining samples uncontaminated by water from any other depth.

3.1.1.1 Turbidity Monitoring Equipment

Monitoring required for turbidity shall be measured in Nephelometric Turbidity Units (NTU) using a standard Nephelometer.

3.1.2 Dredging and Disposal Locations

Routine monitoring shall occur at the following locations:

3.1.2.1 Station Descriptions

a. At the Dredge Site

Location:

Compliance: 150 meters downcurrent of the point of dredging within the densest portion of any visible turbidity plume at surface, mid-depth, and 1 foot above bottom.

Background: 300 meters upcurrent of the point of dredging outside of any visible turbidity plume at surface, mid-depth, and 1 foot above bottom.

Frequency: Once daily, after dredging has been ongoing for at least 2 hours.

b. At the Disposal Sites

(1) During disposal at the beach disposal sites on Amelia Island.

Location:

Compliance: 150 meters downcurrent from the discharge point within the densest portion of any visible turbidity plume at surface and mid-depth. If no plume is visible, samples shall be collected 150 meters downcurrent of the discharge point and 50 meters offshore.

Background: 200 meters upcurrent from the discharge point, outside of any visible turbidity plume at the same distance offshore as the compliance point.

Frequency: Once daily, samples shall be collected after discharge has been continual for at least 1 hour.

(2) During disposal at the nearshore site, ~~and Ocean Dredge Material Disposal Site.~~

Location:

Compliance: 150 meters downcurrent from the discharge point within the densest portion of any visible turbidity plume at surface, mid-depth

and 1 foot above the bottom.

Background: 200 meters upcurrent from the discharge point, outside of any visible turbidity plume, at surface, mid-depth, and 1 foot above the bottom.

Frequency: Once daily, samples shall be collected during daylight hours only and approximately halfone-half hour after discharge of material.

~~e. Compliance ODMDS~~

~~For all ODMDS disposal activities, the Contractor shall be required to prepare and operate under an approved electronic verification plan for all disposal operations. As part of this plan, the Contractor shall provide an automated system that will continuously track (1 to 5 minute intervals) the horizontal location and draft condition (vertical) of the disposal vessel from the point of dredging to the disposal area, and return to the point of dredging. Required digital data are as follows:~~

~~(1) Date;~~

~~(2) Time;~~

~~(3) Vessel Name;~~

~~(4) Dump Number;~~

~~(5) Map Number on which dump is plotted (if appropriate);~~

~~(6) Beginning and ending coordinates of the dredged area for each load (source of dredged material);~~

~~(7) Actual location (in degrees and minutes of latitude and longitude) at points of initiation and completion of disposal event;~~

~~(8) Brief description of material disposed;~~

~~(9) Volume of material disposed; and,~~

~~(10) Disposal technique used.~~

~~3.1.2.2 Turbidity~~

~~Samples to be analyzed for turbidity shall be taken twice daily (one between the hours of 12 midnight and 12 noon and the other between 12 noon and 12 midnight) at least 4 hours apart at surface and mid depth at the following locations. Additional sampling shall be performed when the Contracting Officer determines that there may be non-compliance with water quality standards.~~

3.2 TURBIDITY TESTS

3.2.1 Testing

The Contractor shall provide the Government with a certification, attesting to the accuracy of his testing equipment and procedure. The Contractor shall also provide the Government with a duplicate of the standard used to calibrate his testing instrument as well as a complete set of operating

instructions for the turbidity testing equipment. The Contractor and the Corps will use this standard throughout the project to maintain the calibration of the equipment. Whenever there is doubt as to the adequacy of the testing or validity of the results, the COR may direct that additional tests be performed at no additional cost to the Government.

3.2.2 Reporting

The monitoring data shall be recorded on forms that contain the pertinent information in the following paragraphs. Example forms are appended to the end of this Section. Other data shall be submitted in the form supplied by the laboratory chosen to do the analysis. All data shall be forwarded (preferably electronically) to the COR, Environmental Quality Section (CESAJ-PD-EE), and FDEP within 24 hours of collection. Electronic mail addresses of the Corps and FDEP personnel to receive these reports are provided below. Reports shall be provided in a common format such as Excel Spreadsheet (.xls) files, Word (.doc) files, and Web Graphics (Joint Photographic Group or .jpg) files.

NAME	ORGANIZATION	E-MAIL ADDRESS
Russ Tolle	USACE COR	russ.tolle@usace.army.mil
Mark Wolff	USACE COR	mark.wolff@usace.army.mil
Matt Miller	USACE PD-EE	matthew.j.miller@usace.army.mil
James McAdams	USACE PD-EE	james.j.mcadams@usace.army.mil
Martin Seeling	FDEP	Martin.Seeling@dep.state.us.fl

3.2.2.1 Report Contents

- a. Permit application number.
- b. Dates of sampling and analysis.
- c. A statement describing the methods used in collection, handling, storage, and quality control methods used in the analysis of the samples.
- d. A map indicating the sampling location and plume configuration, if any (example map appended to the end of this Section).
- e. A map plotting the dredge location during each traverse through the borrow area. This map can be combined with the map indicating the sampling location.
- f. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, and accuracy of the data.
- g. Results of the analyses.
- h. A description of any factors influencing the dredging or disposal operation or the sampling program. Reports shall be furnished daily even when no sampling is conducted. When sampling is not conducted, a brief statement shall be given in the report explaining the reason for not conducting the sampling, such as "dredge not working due to mechanical problems" or "no sampling taken due to high seas".

3.2.2.2 Monitoring Reports

Monitoring reports shall also include the following information for each day that samples are taken:

- a. Time of day and date samples were taken.
- b. Depth of water body.
- c. Depth of sample.
- d. Antecedent weather conditions.
- e. Tidal stage and direction of flow.
- f. Dredge or disposal location (station location and map).
- g. Water sample location.
- h. Wind direction and velocity.

3.2.2.3 Notification

If turbidity exceeds background levels by more than 29 NTU, the Contractor shall immediately notify the Chief, Environmental Branch at 904-232-1685 and the COR, or on the morning of the following work day if it occurs after normal work hours. In addition, all dredging or disposal activity shall cease immediately and all measures to reduce turbidity shall be taken. Dredging or disposal shall not resume until corrective measures have been taken and turbidity has returned to acceptable levels as determined by proper testing described in subparagraph "Dredging and Disposal Locations" above.

~~3.3 ODMDS REPORTING AND NOTIFICATION~~

~~Data required for ODMDS monitoring has been described earlier in this Section. Disposal reports containing this data shall be submitted to the COR on a weekly basis.~~

~~The Contractor shall notify the Acting Chief, Environmental Branch at 904-232-1685 and the COR within 24 hours if disposal is suspected to have occurred outside the ODMDS. If material is determined to have been disposed of outside the ODMDS, the Contractor may be held responsible for determination of damage to resources outside the ODMDS, recovery of misplaced material, and restoration of resources outside the ODMDS.~~

~~The Contractor shall also provide pre and post bathymetric surveys of the ODMDS site in both hard and electronic format. Within three months of dredging and disposal, a survey shall be performed. The post disposal survey shall be conducted within 30 days after completion of disposal. All surveys shall be sufficient to encompass the ODMDS and a 0.25 nautical mile (nm) wide area around the ODMDS. The surveys shall be taken along lines spaced at 500 foot intervals or less. Accuracy of the surveys shall be within 0.5 feet. Horizontal location of the survey lines and depth sounding points shall be determined by an automated positioning system utilizing either a microwave line of sight system or differential global positioning system. The vertical datum shall be mean lower low water (MLLW) and the horizontal datum Florida State Plane or Geographic (NAD 1983 or NAD 1927).~~

3.3 WORK DELAY

Delays in work due to the fault or negligence of the Contractor or the Contractor's failure to comply with this specification shall not be compensable. Any adjustments to the contract performance period or price that are required as a result of compliance with this section shall be made in accordance with the provisions of the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES.

3.4 SAMPLE - TURBIDITY MONITORING TEST REPORT

See APPENDIX 01411-A at the end of this Section (with example location map appended) (3 pages).

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SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1999b) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
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ASTM E 329	(1998a) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

3.2 QUALITY CONTROL PLAN

3.2.1 General

Within ~~1520~~ calendar days of the Notice of Award, the Contractor shall submit the CQC Plan for review and acceptance by the Contracting Officer prior to the Coordination Meeting. The Government will consider an interim plan for the first 30 days of operation. However, the Contractor shall furnish, not later than 30 calendar days after receipt of the Notice to

Proceed, an acceptable final CQC Plan with which he proposes to implement the requirements of the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES. The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used.

3.2.1.1 Resubmittal

If the Contractor fails to submit an acceptable CQC plan within the time prescribed, construction **SHALL NOT** start. While the Contractor is operating under an acceptable interim plan, the Contracting Officer shall retain funds from progress payments in accordance with the Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES until such time as the Contractor submits an acceptable final plan. If an acceptable final plan is not submitted within a reasonable time, as determined by the Contracting Officer, the Contracting Officer may order the Contractor to stop work until such time as an acceptable plan has been submitted. Any such stop work order shall not be considered a suspension of work for an unreasonable period of time under the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES and the Contractor shall not be entitled to pay adjustments as a result of the stop work order.

3.2.1.2 Failure

Failure to comply with the above requirements within the time prescribed will be considered a condition endangering the performance of the contract and may be considered grounds for termination of the contract in accordance with the Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES of this contract.

3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall perform his duties in tandem with those of the Project Superintendent and with direct reporting responsibility to an officer of the prime Contractor and/or an individual not directly responsible for production.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function. If included, see paragraph LIMITATIONS ON SUBSTITUTIONS FOR CERTAIN POSITIONS AND/OR SUBCONTRACTORS of Section 00800 SPECIAL CONTRACT REQUIREMENTS.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing

submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the Coordination Meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer or Contracting Officer's Representative.

3.3 COORDINATION MEETING

After award of the contract, but before physical work starts, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer or Contracting Officer's Representative. The minutes shall become a part of the contract file. There may be occasions

when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of 5 years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. Period of absence may not exceed 1 week at any one time, and not more than 15 workdays during a calendar year. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 CQC Personnel

A staff shall be maintained under the direction of the CQC System Manager to perform all CQC activities. The staff must be of sufficient size to ensure adequate CQC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned CQC responsibilities and must be allowed sufficient time to carry out these responsibilities. The CQC plan will clearly state the duties and responsibilities of each staff member.

3.4.4 Additional Requirement

In addition to the above experience and/or education requirements, the CQC System Manager shall have completed the U.S. Army Corps of Engineers (COE) course "Construction Quality Management For Contractors". In the event the proposed CQC System Manager has not completed the training, he or she will

have 60 days after Notice of Award to do so. This course is periodically offered by the COE. Information regarding the course can be obtained from the following website: <http://www.saj.usace.army.mil/conops/construction> or by contacting Chief, Quality Assurance Section at ~~904-232-1183~~ 904-232-1128.

3.4.5 Registered Land Surveyor

A Registered Land Surveyor registered in the State of Florida shall perform the layout of the work as required in the paragraph LAYOUT OF WORK of Section 01000 GENERAL REQUIREMENTS. The Registered Land Surveyor shall certify all field notes, computations, and all other records relating to surveys or layout of the work.

3.4.6 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.

- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily Contractor's Quality Control (CQC) report (sample CQC form appended to the end of this Section). A suggested format for the minutes is appended to the end of this Section. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report (sample CQC form appended to the end of this Section). A suggested format for the minutes is appended to the end of this Section. Exact

location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer.

Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$1,950.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Government-approved laboratory. Coordination for each specific test, exact delivery location, and dates will be made through the Area Office.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK of Section 00800 SPECIAL CONTRACT REQUIREMENTS, or by the specifications, the CQC System Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION below. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final

Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at this inspection. Additional Government personnel including, but not limited to, those from Sponsor, User, Customer, or Owner, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES.

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.

- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms are appended at the end of this Section. The Contracting Officer's Representative will instruct the Contractor in the preparation of these forms during the Preconstruction Conference as specified in Section 01000 GENERAL REQUIREMENTS.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.12 SAMPLE - PREPARATION AND INITIAL PHASE CHECKLISTS

See APPENDIX 01451-A at the end of this Section (3 pages).

3.13 SAMPLE - CONTRACTOR'S QUALITY CONTROL (CQC) REPORT

See APPENDIX 01451-B at the end of this Section (5 pages).

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all excavation and disposal of all material as specified herein or indicated on the drawings. This scope also includes all necessary measures for protection of the environment. Environmental protection requirements under this contract are as important to overall completion of the work as other technical aspects. Failure to meet the requirements of these specifications for environmental protection may result in work stoppages or termination for default. No part of the time lost due to any such work stoppages shall be made the subject of claims for extensions of time or for excess costs or damages by the Contractor. If the Contractor fails or refuses to promptly repair any damage caused by violation of the provisions of these specifications, the Contracting Officer may have the necessary work performed and charge the cost thereof to the Contractor.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS (FBPSM)

FBPSM Minimum Technical Standards, Chapters 177,
472, 61G17

TRI-SERVICE STANDARDS (TSS)

TSS (1999) A/E/C CADD Standards

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Electronic Tracking System Data; FIO.

The Contractor shall furnish required discs, CD-ROM, and charts to the Contracting Officer's Representative (COR).

Equipment and Performance Data; FIO.

The Contractor shall furnish proof of electronic positioning equipment

calibration to the COR.

SD-18 Records

Notice of Intent to Dredge; FIO.

Prior to commencement of work on this contract, the Contractor shall notify the Commander, Seventh Coast Guard District of his intended operations to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least two weeks prior to the commencement of this dredging operation. A copy of the notification shall be provided to the COR.

Relocation of Navigation Aids; FIO.

The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The Contractor shall notify the Commander, Seventh Coast Guard District, Miami, Florida, in writing, with a copy to the Contracting Officer, 30 days in advance of the time he plans to dredge adjacent to any aids which require relocation to facilitate dredging. The Contractor shall contact the U.S. Coast Guard for information concerning the position to which the aids will be relocated. A copy of the notification shall be provided to the COR.

Notification of Discovery of Historical Period Shipwreck Sites; FIO.

The Contractor shall immediately notify the COR if any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered.

Notice of Need for Dredging Survey; FIO.

The Contractor shall give 10 days advance notice, in writing, to the COR of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section.

Daily/Monthly Report of Operations; FIO.

The Contractor shall prepare and submit three (3) copies of the Daily Report of Operations, using either ENG Form No. 27A or ENG Form No. 4267, for each dredge and/or unloader working. This report shall be submitted on a daily basis and not in groups (groups = multi-days reports packaged together at one time) except as noted in subparagraph a. below. A copy of these forms are appended to the end of this Section. In addition to the daily report, the Contractor shall prepare a Monthly Report of Operations for each month or partial month's work on either ENG Form No. 27A or ENG Form No. 4267. The monthly report shall be submitted on or before the 7th of each month, consolidating the previous month's work. Upon completion of the job, the Contractor shall submit a consolidated job report, combining the monthly reports. The Contractor shall distribute one copy of each report to the following:

- a. District Engineer; ATTN: CESAJ-EN-C; U.S. Army Engineer District, Jacksonville, P.O. Box 4970; Jacksonville, Florida 32232-0019. Reports shall be submitted on a monthly basis with daily reports accompanying the monthly report and job report.

- b. Quality Assurance Representative (QAR) assigned to the dredge/project.

Additionally, one copy of these shall be maintained by the Contractor on the dredge(s) for the Government's inspection purpose. Further instructions on the preparation of the reports will be furnished at the Preconstruction Conference.

Notice of Misplaced Material; FIO.

The Contractor shall notify the U.S. Coast Guard Marine Safety Office of any misplaced material as stated in the Clause OBSTRUCTION OF NAVIGABLE WATERWAYS of Section 00700 CONTRACT CLAUSES.

Log of Near Beach Quality Sand Disposal; FIO.

Refer to subparagraph "Logs" of subparagraph "Near Beach Quality Sand" of paragraph DISPOSAL OF EXCAVATED MATERIAL below for submittal.

1.4 DREDGING RESTRICTIONS

~~1.4.1 Order of Work~~

~~There is no specific order of work for this project. The dredging performed by all dredges shall be continuous within reaches approved by the COR.~~

1.4.1 Hopper Restriction

The use of hopper dredges within Kings Bay Entrance Channel is prohibited from 01 March through 14 December.

1.4.2 Transportation of Material

Water and dredge material shall not be permitted to overflow or spill out of barges or hopper dredges during transport to the disposal site.

1.5 ORDER OF WORK

There is no order of work specified relative to performance of the dredging.

1.6 PUMPING OF BILGES

Contractors are warned that pumping oil or bilge water containing oil into navigable waters, or into areas which would permit the oil to flow into such waters, is prohibited by Section 13 of the River and Harbor Act of 1899, approved 3 March 1899 (30 Stat. 1152; 33 U.S.C. 407). Violation of this prohibition is subject to the penalties under the referenced Acts.

1.7 HISTORICAL PERIOD SHIPWRECK SITES

If any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered, the Contractor acknowledges that:

- a. The site(s), articles, or other materials are the property of the State of Florida, with title vested in the Department of State, Division of Historical Resource; and that,

b. He will immediately notify the Contracting Officer.

1.8 UTILITY CROSSINGS

1.8.1 General

It is the Contractor's responsibility to investigate the location of all utility crossings. The Contractor shall take precautions against damages which might result from his operations in the vicinity of the utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by the Contracting Officer. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

1.9 PERMITS

The Contractor's attention is directed to the Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES and the paragraph PERMITS AND AUTHORIZATIONS of Section 01410 ENVIRONMENT PROTECTION.

1.10 FINAL CLEANUP

Final cleanup, as stated in the paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK of Section 00800 SPECIAL CONTRACT REQUIREMENTS, shall include the removal of all the Contractor's plant and equipment either for disposal or reuse. Plant and/or equipment and/or materials to be disposed of shall **ONLY** be disposed in a manner and at locations approved by the COR. Unless otherwise approved by the COR, the Contractor will not be permitted to abandon any equipment in the disposal area or other areas adjacent to the worksite.

a. Failure to promptly remove all plant, pipeline, equipment, and materials upon completion of the dredging will be considered a delay in the completion of the final cleanup and demobilization work. In such case, the Government will exercise its right as stated in Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES to remove any plant and/or equipment and/or materials at the Contractor's expense.

1.11 MEASUREMENT

Refer to Section 01270 MEASUREMENT AND PAYMENT.

1.12 PAYMENT

Refer to Section 01270 MEASUREMENT AND PAYMENT.

1.13 WORK VIOLATIONS

Work done in violation of these specifications or a verbal or written stop order of the Contracting Officer or his Authorized Representative will be considered as unsatisfactory progress for purposes of progress payments in accordance with Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES.

PART 2 PRODUCTS

2.1 CHARACTER OF MATERIALS

The materials to be excavated from the Kings Bay Entrance Channel consist of the shoaling that has occurred since the channel was last dredged. No core borings have been drilled in the current shoal deposits. Excavation of insitu rock, if encountered, will not be required; but, its location shall be reported to the Contracting Officer.

Representative core boring logs and laboratory tests from previous maintenance dredging events are included in the specifications. (appended to the end of SECTION 01000: GENERAL REQUIREMENTS):

CB-KBM89-5A, 7, 9, 10, & 12

CB-KBM90-3, 4, 5, & 12

CB-KBM91-16, 20

CB-KBM93-2, 4, 5, 6, & 7

CB-KBM94-4

CB-KBM96-14

CB-KBM97-7, 9

Cut-1N, Station 100+00 to Station 220+00

Based on historic explorations, the shoal materials in this portion of the Entrance Channel are primarily (SP) and (SP-SM) sands. The sands are composed of fine to medium quartz with variable amounts of shell and shell fragments. The shell is sand sized to gravel sized. Based on the results of previous explorations, occasional beds of oyster shell will be encountered.

Isolated pockets of stiff clay were encountered during the original excavation of this reach of the Entrance Channel; therefore, dredging in the lower elevations (below -49 feet) will occasionally encounter virgin stiff clay. The strong currents in this portion of the Entrance Channel create isolated gravely deposits of coarse sands, shell, and rock fragments which will be encountered during dredging. The western portion of this reach of the channel was originally excavated in rock; therefore, dredging in the lower elevations will occasionally encounter rock and rock fragments. The isolated gravely deposits and the occasional rock and rock fragments discussed above will typically not be documented in the core boring logs.

Cut-1N from Station 220+00 to Station 340+00

Based on historic explorations, the shoal materials in this portion of the Entrance Channel are primarily clayey and silty materials with variable amounts of sand and shell. The sands are composed of fine to medium quartz with variable amounts of shell and shell fragments. The shell is sand sized to gravel sized. Previous explorations indicate that the materials to be dredged are highly variable in composition from location to location.

The shoal materials in this reach of the Entrance Channel are generally soft, but below elevation -49 feet MLW there may be some virgin firmer materials remaining from the original excavation of the Entrance Channel.

The materials from Station 220+00 to 230+00, north of the channel centerline, typically varies from clean sands to silty and/or clayey sands.

PART 3 EXECUTION

3.1 NOTIFICATION OF COAST GUARD

3.1.1 Navigation Aids

Navigation aids located within or near the areas required to be dredged will be removed, if necessary, by the U.S. Coast Guard in advance of dredging operations. The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid of navigation.

3.1.2 Dredging Aids

The Contractor shall obtain approval from the U.S. Coast Guard for all buoys, dredging aid markers to be placed in the water, and dredging aid markers affixed with a light prior to the installation. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids.

3.2 WORK AREA

The Contractor will be permitted to exclude the public from the work areas in the immediate vicinity of his dredging, transporting, and disposal operations including dredging, transporting, and disposal operations. The Contractor shall prevent public access to the discharge end of the pipeline. The Contractor shall erect, maintain, and move as necessary, a restrictive barrier around the discharge of the hydraulic pipeline. The barrier shall be constructed so as to prevent the public from approaching the discharge from any direction closer than 40 feet. The Contractor shall post signs in a conspicuous location with the wording "DANGER - HIGH PRESSURE DISCHARGE FROM DREDGE". Enforcement shall be the Contractor's responsibility at no additional cost to the Government. The enforcement shall be coordinated with local enforcement agencies and will be subject to approval of the COR. Additionally, the Contractor shall place a safety person at the discharge end of the disposal pipeline. The safety person shall be present at all times during discharge operations and will maintain radio communication between the dredge and the disposal operation.

3.2.1 Access

The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the work site, mooring area, and disposal area. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies.

3.2.2 Protection of Existing Waterways

The Contractor shall conduct his operations in such a manner that material or other debris are not pushed outside of dredging limits or otherwise deposited in existing side channels, basins, docking areas, or other areas being utilized by vessels. The Contractor will be required to change his method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, the same

must be promptly removed by and at the expense of the Contractor to the satisfaction of the COR.

3.2.3 Adjacent Property and Structures

No dredging will be permitted within 25 feet of any structure. Dredging adjacent to any structure will not be permitted any closer than that shown on the contract drawings. Any damage to private or public property or structures resulting from the disposal or dredging operations shall be repaired promptly by the Contractor at his expense. Any damage to structures as a result of Contractor's negligence will result in suspension of dredging and require prompt repair at the Contractor's expense as a prerequisite to the resumption of dredging.

3.2.4 Subaqueous Cable Crossings

The Contractor shall be responsible for verifying the locations and depths of all utility crossings and take precautions against damages which might result from his operations, especially the sinking of dredge spuds and/or anchors into the channel bottom, in the vicinity of utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by the COR. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

3.3 DISPOSAL OF EXCAVATED MATERIAL

3.3.1 General

Material excavated shall be transported to and deposited in the disposal areas designated on the drawings. The approximate maximum and average distances to which the material will have to be transported are as follows:

Disposal Area	Maximum Distance	Average Distance
D/A-B (Beach)	5.0 miles	4.0 miles
D/A-N (Nearshore)	8.5 miles	6.5 miles
D/A-O (Ocean)	13.0 miles	12.5 miles

3.3.2 Ocean Dredged Material Disposal Site (ODMDS)

The designated material to be excavated shall be transported to and deposited in the ODMDS offshore disposal area designated as "Ocean Disposal Area - O" as shown on the drawings. The material shall be dumped at the center of the ODMDS "Ocean Disposal Area - O". Dredged material shall not be placed higher than elevation -30 feet MLLW in "Ocean Disposal Area - O".

3.3.3 Beach Disposal

Dredged material from Kings Bay Entrance Channel Cut 1-N, Station 100+00 to Station 220+00 shall be placed in Beach Disposal Area (D/A) B as shown on the contract drawings. The dredged material shall be placed to the sections and limits as shown on the drawings to the extent of the dredged material. Passage of equipment, pipeline, etc., shall be seaward of the apparent MHW within the limits of the D/A B.

3.3.3.1 Order of Placement

Dredged material shall be placed in D/A B commencing at DEP Monument R-15

and proceeding southerly until all dredged material has been placed to the sections and limits shown on the contract drawings.

a. Prior to placement of fill, the Contractor shall remove from the site of the work all snags, driftwood, and similar debris lying within the foundation limits of the beach fill section. All materials removed shall be disposed of in areas provided by and at the expense of the Contractor and approved by the COR. Grading and other construction equipment will not be permitted outside the easement lines shown on the drawings except for ingress and egress to and from the site.

b. The excavated material shall be placed and brought to rest on the beach to the lines, grade, and cross sections indicated on the drawings, unless otherwise provided for herein or directed by the COR. The Contractor shall not stockpile pipe or any other equipment or debris on the beach except as approved by the COR. The beach is subject to changes and the elevations on the beach at the time the work is done may vary from the elevations shown on the drawings. The COR reserves the right to vary the width or grade of the berm from the lines and grade shown on the plans in order to establish a uniform beach for the entire length of the project. The beach disposal section shown on the drawing is for the purpose of estimating the theoretical amount of fill needed and will be used by the COR in making any change in the lines and grade. The Contractor may not be able to achieve the exact disposal area shown on the drawings. He will, however, be required to move the pipeline discharge to another part of the disposal area when he has discharged the amount of dredged materials in an area that would produce that cross section. Earthen pedestrian access ramps shall be provided across the dredge discharge pipeline at 200-foot intervals. The Contractor shall monitor the dredge and fill operations and shall notify the COR if and when the quantity to be dredged appears to be excessive for the designated beach disposal area. The Contractor will not be required to dress the fill below the water line to the slope shown but will be required to do the dressing specified in subparagraph "Dressing" below.

3.3.4 Grade Stakes

Grade stakes shall be metal pipes that can be completely removed intact by the Contractor after placement of the fill. Grade stakes shall be of sufficient length to protrude above the final berm elevation and facilitate their extraction.

3.3.5 Temporary Longitudinal Dikes

Temporary longitudinal dikes and spreader and/or pocket pipe shall be used to prevent gullyng and erosion of the beach and fill and to retain the fill on the beach and within the limits of the fill cross section. As the work progresses, dikes or mounds shall be constructed along the beach to direct the pipeline discharge longitudinally along the beach to avoid transverse gullyng directly from the discharge point to the ocean, and to build the new berm to design grade. Longitudinal dikes shall initially be 300 feet long in advance of filling operations. They may need to be lengthened to meet water quality standards, to build to the required lines and grades, and to keep material within the toe-of-fill. The Contractor will not be held responsible for erosion caused by waves after the beach fill has been satisfactorily placed. No undrained pockets shall be left in any fill during or upon completion of the work. The Contractor shall not permit wastewater to flow landward of the fill section or water to pond

between the fill and upland. Groins, bulkheads, revetments, seawater pipe structures, and other structures within the fill section shall be protected by the Contractor to prevent damage thereof by the Contractor's operations.

Any damages assessed as a result of any of the above items shall be at the Contractor's expense.

3.3.6 Rehandled Materials

Any material that is rehandled or moved and placed in its final position by methods other than hydraulic shall be placed in horizontal layers not exceed three (3) feet in thickness. Compaction of the layers will not be required. The Contractor shall schedule his operations to take advantage of tides so that filling is done in the dry or as directed.

3.3.7 Dressing

Final dressing shall not take place until all dredging is completed, at which time all evidence of haul road or pipeline shall be removed and the fill shall be graded and dressed so as to eliminate any undrained pockets and abrupt humps and depressions in the beach fill surfaces and as necessary to comply with subparagraph "Tolerances" below. Grade stakes used in the placement of the fill shall be removed intact, without breaking. All dikes shall be completely degraded. The bank caused by wave forces shall be graded down to a slope no steeper than 1 vertical on 20 horizontal for D/A B.

3.3.8 Tolerances

A tolerance of one (1.0) foot above the prescribed berm grade and slopes above the wave zone will be permitted in the final beach surface.

3.3.9 Near Beach Quality Sand

It is anticipated that the material excavated from the channel (Cut 1N - north half of channel, Sta. 220+00 to Sta. 230+00) is suitable for disposal in the Nearshore Disposal Area shown on the contract drawings.

3.3.9.1 Logs

The Contractor shall keep a log for each load placed in the Nearshore Disposal Area. The log entry for each load shall include the date, the time of dump, the approximate volume of material in the load, the EPS coordinates at the dump location, and a map of the Nearshore Disposal Area showing the location of the dump. At the completion of dredging in the near beach quality sand reach of the channel, the log(s) shall be submitted to the COR for forwarding to the appropriate State agency.

3.3.10 Barges

Water and dredged materials shall not be permitted to overflow or spill out of barges while transporting to the disposal site(s). Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging.

3.3.11 Nearshore Disposal

Dredged material from Channel Cut 1N, Station 220+00 to Station 230+00,

shall be placed in Disposal Area (D/A) N as shown on the contract drawings.

Disposal Area N is located approximately 5 miles south of the southerly channel jetty, Kings Bay Entrance Channel, and extends from that point southerly approximately 2.4 miles. Exact X-Y location coordinates are shown on the contract drawings. The westerly/easterly limits of D/A N are the -10.0 foot MLW contour line and the -35 foot MLW contour line, respectively. Depth sounding instruments shall be used to verify location of westerly and easterly contour lines. Dredged material shall be placed uniformly throughout D/A N in as shallow water as possible with available dredging and disposal equipment.

3.3.12 Offshore Disposal

a. Dredged material from Channel Cut 1N Station 220+00 to Station 340+00, except for Station 220+00 to Station 230+00 (north half of channel), shall be placed in Disposal Area (D/A) O, the designated ocean disposal area, as shown on the contract drawings.

b. The use of bottom dump barges or bottom dump dredges and hydraulic unloading barges and hydraulic unloading hopper dredges to dispose of dredged material in the offshore disposal area will be permitted. Water and excavated material shall not be permitted to overflow or spill out of barges, dump scows, or hopper dredges while in route to the disposal site. Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of excavation operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of excavation. Material shall be placed in the offshore disposal area below the -30 MLW level, and within ~~1,500 feet of the working boundary center~~ of the ODMDS.

3.3.13 Electronic Tracking System (ETS) for Ocean Disposal Vessels

The Contractor shall furnish an ETS for surveillance of the movement and disposition of dredged material during excavation and ~~ocean disposal~~ (nearshore and ocean). This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location. ~~in an acceptable coordinate system which can be related to, or is directly based on the appropriate state plane coordinate system every 500 feet (at least) during loading cycle and during travel to disposal area, and every minute (at least) or every 200 feet of travel, whichever is smaller, while approaching within 1,000 feet and within limits of disposal area.~~

3.3.13.1 ETS Standards

The Contractor shall provide automated (computer) system and components to perform in accordance with EM 1110-1-2909. A copy of the EM can be downloaded from the following website:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>.

Horizontal location shall have an accuracy equal to or better than a standard DGPS system, equal to or better than + 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of + 0.5 foot. Horizontal location and vertical data shall be collected in sets and

each data set shall be referenced in real-time to date and local time (to nearest minute), and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall be calibrated, as required, in the presence of the COR at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The COR shall have access to the ETS in order to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the COR to be operational and within acceptable accuracy. It is the Contractor's responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the COR's approval.

3.3.13.2 ETS Data Requirements and Submissions

~~All data shall be collected and stored on 3 1/2-inch disks or CD-ROM in ASCII format using IBM compatible MS-DOS 5.0 or later version. Data shall include date, time, trip ID number, vessel name and name of vessel's captain, location and draft of disposal vessel every 500 feet (at least) during loading cycle and during travel to disposal area, and every minute (at least) or every 200 feet of travel, whichever is smaller, while approaching within 1,000 feet and within limits of disposal area. Data collected while the disposal vessel is in the vicinity of the disposal area shall also be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching, traversing, and leaving the disposal area. More than one disposal area trip may be stored on a single disk or CD-ROM as long as trip data is indexed and clearly identifiable. The completed, original disk or CD-ROM shall be furnished to the COR within 24 hours. Plotted charts shall be organized and maintained at a central work location for inspection on a daily basis by the COR. Plotted charts shall be organized as directed, bound and submitted weekly to COR for permanent file record. In addition to the above, the Contractor shall provide the actual volume of each dump along with the plotted data.~~

a. The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. [Note: A dredging and disposal cycle constitutes the time from commencement of dredging to complete discharge of the material.] The COR shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.

b. All data shall be collected and stored on 3 1/2-inch discs or CD-ROM(s) in ASCII format using IBM compatible MS-DOS 5.0 or later version. Each dredging and disposal cycle will be a separate and distinct ASCII file, labeled by the trip number. More than one file may be stored on the disc(s) or CD-ROM(s).

c. Data shall be collected, during the dredging and disposal cycle, every 500 feet (at least) during travel to the disposal area, and every minute or every 200 feet, whichever is smaller, while approaching within 1,000 feet and within the disposal area.

d. The required digital data to be collected for each dredging and disposal cycle includes the following:

- (1) Trip Number
- (2) Data
- (3) Time

- (4) Vessel ID
- (5) Vessel Captain
- (6) State Plane X Coordinate - in accordance with subparagraph c. above
- (7) State Plane Y Coordinate - in accordance with subparagraph c. above
- (8) Vessel Draft
- (9) Type of Disposal Vessel
- (10) Exact State Plane X and Y coordinate at start of dump
- (11) Volume of Material Disposed

e. Plot Reporting (2 types):

(1) Tracking Plot - For each disposal event, data collected while the disposal vessel is in the vicinity of the disposal area shall be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching and traversing the disposal area. Each plot will be attached to the corresponding ASCII data table when submitted. A sample Track and Draft Plot Diagram is appended to the end of this Section.

(2) Scatter Plot - Following completion of all disposal events, a single and separate plot will be prepared to show the exact disposal locations of all dumps. Every plotted location shall coincide with the beginning of the respective dump. Each dump will be labeled with the corresponding Trip Number and shall be at a small but readable scale. To accompany the Scatter Plot, a single and separate table will be prepared of the corresponding ETS data for every dump location. The volume of material disposed for each trip will be included in this table. A sample Scatter Plot Diagram with Table is appended to the end of this Section.

f. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.

3.3.14 Dredge Pipelines

3.3.14.1 Dredge Discharge Pipeline

The Contractor shall plainly mark the pipeline access routes with conspicuous stakes, targets and/or buoys to be maintained throughout the contract operations. A tight dredge discharge pipeline shall be maintained to prevent spilling of dredged material or dredge water outside of the disposal area. The Contractor shall provide and maintain radio communication between the dredge and the disposal areas and the dredge and the COR. The pipeline shall be inspected at least twice daily for leaks. Failure to immediately repair leaks in the discharge pipeline will result in suspension of dredging operations and require prompt repair of pipeline as a prerequisite to the resumption of dredging. Any damage to private or public property resulting from the Contractor's operations shall be repaired by the Contractor at his expense.

3.3.14.2 Submerged Pipeline

In the event the Contractor elects to submerge his pipeline, the pipeline

shall rest on the bottom, and the top of the submerged pipeline and any anchor securing the submerged pipeline shall be no higher than the required project depth for the channel in which the submerged pipeline is placed. Should the Contractor elect to use a pipeline material which is buoyant or semi-buoyant, such as PVC pipe or similar low density materials, the Contractor shall securely anchor the pipeline to prevent the pipeline from lifting off the bottom under any conditions. The Contractor shall make daily underwater inspections of the submerged pipeline to ensure buoyancy has not loosened the anchors. The Contractor shall remove all anchors when the submerged pipeline is removed. The location of the entire length of submerged pipeline shall be marked with signs, buoys, lights, and flags conforming to U.S. Coast Guard regulations.

3.3.14.3 Floating Pipeline

Should the Contractor's pipeline not rest on the bottom, it will be considered a floating pipeline and shall be visible on the surface and clearly marked. In no case will the Contractor's pipeline be allowed to fluctuate between the surface and the bottom, or lie partly submerged. Lights shall be installed on the floating pipeline as required in paragraph SIGNAL LIGHTS of Section 00800 SPECIAL CONTRACT REQUIREMENTS. The lights shall be supported either by buoys or by temporary piling, provided by the Contractor and approved by the COR. Where the pipeline does not cross a navigable channel, the flashing yellow all-around lights shall be spaced not over 200 feet apart, unless closer spacing is required by U.S. Coast Guard personnel, in which case the requirements of the U.S. Coast Guard shall govern, at no additional cost to the Government.

3.3.15 Misplaced Materials

Materials deposited outside of the disposal areas will be classified as misplaced material and will result in a suspension of dredging operations and require the removal of such materials as a prerequisite to the resumption of dredging. In addition, the Contractor must notify the COR and the Environmental Protection Agency within 24 hours of a misplaced dump or any other violation of the Site Monitoring and Management Plan for Fernandina ODMDS. Corrective actions must be implemented by the next dump and the COR must be informed of actions taken.

3.4 REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SIDE SLOPES

3.4.1 Required Depth

The material actually removed from within the specific areas to be dredged to a depth of not more than the required depth shown on the drawings will be estimated and paid for in accordance with the provisions contained in the paragraphs MEASUREMENT and PAYMENT above.

3.4.2 Allowable Overdepth

To cover the inaccuracies of the dredging process, material actually removed from the specified areas to be dredged, to a depth below the required depth of not more than the allowable overdepth shown on the drawings, will be measured and paid for in accordance with the provisions contained in the paragraphs MEASUREMENT and PAYMENT above.

3.4.3 Side Slopes

Although dredging of side slope material may be necessary to provide the

required project channel dimensions (depth and width), the side slopes shown on the drawings are provided for payment purposes only. Side slopes may be formed by box cutting or dredging along the side slope. Material actually removed, within the limits approved by the COR, to provide for final side slopes not flatter than that shown on the contract drawings, but not in excess of the amount originally lying above this limiting side slope, will be measured and paid for in accordance with the provisions contained in the paragraphs MEASUREMENT and PAYMENT above. Such amount will be estimated and paid for whether dredged in original position or by box cut dredging whereby a space is dredged below the allowable side slope plane on the bottom of the slope for upslope material capable of falling into the cut. End slopes and transition slopes will not be estimated or paid for under this contract. In such cases, a 0 horizontal on 1 vertical will be used with no upslope allowance provision applied outside the required prism.

3.4.4 Excessive Dredging

Material taken from beyond the limits as described in subparagraphs "Allowable Overdepth" and "Side Slopes" above, will be deducted from the total amount dredged as excessive overdepth dredging, or excessive side slope dredging, for which payment will not be made. Nothing herein shall be construed to prevent payment for the removal of shoals performed in accordance with the applicable provisions of the paragraphs FINAL EXAMINATION AND ACCEPTANCE or SHOALING of Section 01000 GENERAL REQUIREMENTS.

3.5 SURVEYS

3.5.1 General

The COR shall be notified, in writing, 10 days in advance of the need for pre-dredging and after-dredging surveys. Surveys will be performed in accordance with the paragraph QUANTITY SURVEYS of Section 00800 SPECIAL CONTRACT REQUIREMENTS; paragraph LAYOUT OF WORK of Section 01000 GENERAL REQUIREMENTS; Section 01451 CONTRACTOR QUALITY CONTROL; EM's 1110-1-1000, 1110-1-1002, 1110-1-1003, 1110-1-1004, 1110-1-2909, and 1110-2-1003; FBPSM; and, TSS. A copy of the EM's can be downloaded from the following website: <http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. A copy of the TSS can be downloaded from the following website: <http://tsc.wes.army.mil>.

3.5.2 Contractor Representative

All in-place measurement surveys and final acceptance sweep surveys will be performed with a representative of the Contractor on board the Government platform during the full execution of the survey. No in-place measurement or final acceptance sweep survey will be performed without a representative of the Contractor on board the survey vessel. The Contractor's representative shall be fully knowledgeable in offshore construction subsurface surveying procedures, techniques, equipment, and horizontal and vertical calibration methods, and state-of-the-art horizontal and vertical accuracy limitations. The Contractor's representative shall observe and review, in progress, the adequacy and accuracy of the survey for in-place payment purposes, and for the potential existence of collusion, fraud, or obvious error in the data.

3.5.3 Survey Certification

a. Immediately upon completion of any survey, the Contractor's representative shall, based on his on-site review of the survey execution, determine that the survey contains no evidence of collusion, fraud, obvious error, and that subsequent horizontal and vertical corrections are accurately annotated on the subsurface record.

b. The Contractor's authorized representative shall bring aboard the survey vessel a blank copy of the Certification Statement and shall attest to an acceptable survey by signing the Certification Statement before leaving the vessel. Sample copy of the Certification Statement is appended to the end of Section 02325 DREDGING.

c. In the event the Contractor's authorized representative observes (and quantifies) specific documentary evidence of either fraud, collusion, or obvious error, the survey will be immediately rerun. Resurveys will totally supersede any previously run survey and will be run over the full reach of any particular Acceptance section.

d. If acceptability is not acquired after performing one resurvey of an Acceptance Section, a meeting shall be held between the Contractor and the COR to expeditiously resolve the issue causing rejection of the survey. Contractor equipment and personnel standby time to resolve acceptability of the survey shall be at the Contractor's expense.

e. In no case shall a previously unacceptable survey be later judged acceptable by the Contractor; unless such a reassessment/reevaluation is performed within 24 hours after the original survey, and prior to initiating any resurvey action based upon identifiable collusion, fraud, or obvious error.

f. Should the Contractor or his authorized representative refuse to certify to the acceptability of a survey for contract payment without identifiable collusion, fraud, or obvious error, then the following actions will follow:

(1) Preconstruction (pre-dredging) Survey

Excavation shall not commence until representatives of the Contractor and COR have met and resolved the basis for refusal of certification. Should the Contractor commence excavation prior to obtaining an acceptable survey, he shall be liable for any excavation performed. If a resurvey is performed, and accepted, prior excavation will not be measured, estimated, or paid for.

(2) Post-construction (after-dredging) Survey

The 3 week survey window allowed under paragraph MEASUREMENT above will be indefinitely extended until a final survey is accepted. Any material accretion which might occur due to such a time extension will neither be measured, estimated, or paid for.

(3) Refusal to Certify

Contractor equipment and personnel standby time to resolve his refusal to certify to the acceptability of a survey when there is no identifiable collusion, fraud, or obvious error shall be at the Contractor's expense and resultant delays shall not be the basis for time extensions of the contract.

g. Intermediate surveys taken between the pre-dredging and

post-dredging surveys will not be considered for the purposes of determining quantities for final payment and acceptance of the area dredged.

3.5.4 Tide Data

3.5.4.1 Real Time Kinematic (RTK) GPS

RTK GPS will be used for determining Real Time water levels (tide corrections). The Contractor is responsible for providing an RTK capable GPS receiver on board the vessel for all surveying ~~and dredging~~ operations.

The Contractor is also responsible for providing a radio/modem in order to receive carrier-phase corrections from the Corps-owned RTK GPS reference station located at the bath house at the west end of the Fort Clinch fishing pier. Radio frequencies should be obtained from Mr. Bill Brunjes at 904-232-2081. The Contractor will be instructed as to the proper use of this system by Corps personnel.

3.5.4.2 Kinematic Tidal Datum

A file listing the separations between the Reference Ellipsoid and the Chart Datum (Mean Lower Low Water) will be provided to the Contractor for entry into the hydrographic survey software. A Tidal Datum Diagram showing the relationship between NAVD 88 and Mean Lower Low Water is shown in the contract drawings. NAVD 88 will be referenced in all new surveys and new contract documentation as related to this contract.

3.5.4.3 Non-Operational Reference Station

In the event that the reference station becomes non-operational, the Contractor shall contact Mr. Bill Brunjes at the telephone number shown above. The Government will take measures to ensure correction of any problems with the GPS equipment located at the bath house within 72 hours of notification.

3.6 NOISE CONTROL

All hauling and excavating equipment and dredges used on this work shall be equipped with satisfactory mufflers or other noise abatement devices. The Contractor shall conduct his operations so as to comply with all Federal, Commonwealth and local laws pertaining to noise.

3.7 DREDGE SAFETY

During dredging operations the Contractor's dredge shall have a current Certificate of Inspection issued by the U.S. Coast Guard.

3.8 Daily Report of Operations

See APPENDIX 02325-A at the end of this section (4 pages).

3.9 Certification Statement

See APPENDIX 02325-B at the end of this section (1 page).

3.10 Sample Track and Draft Plot Diagram

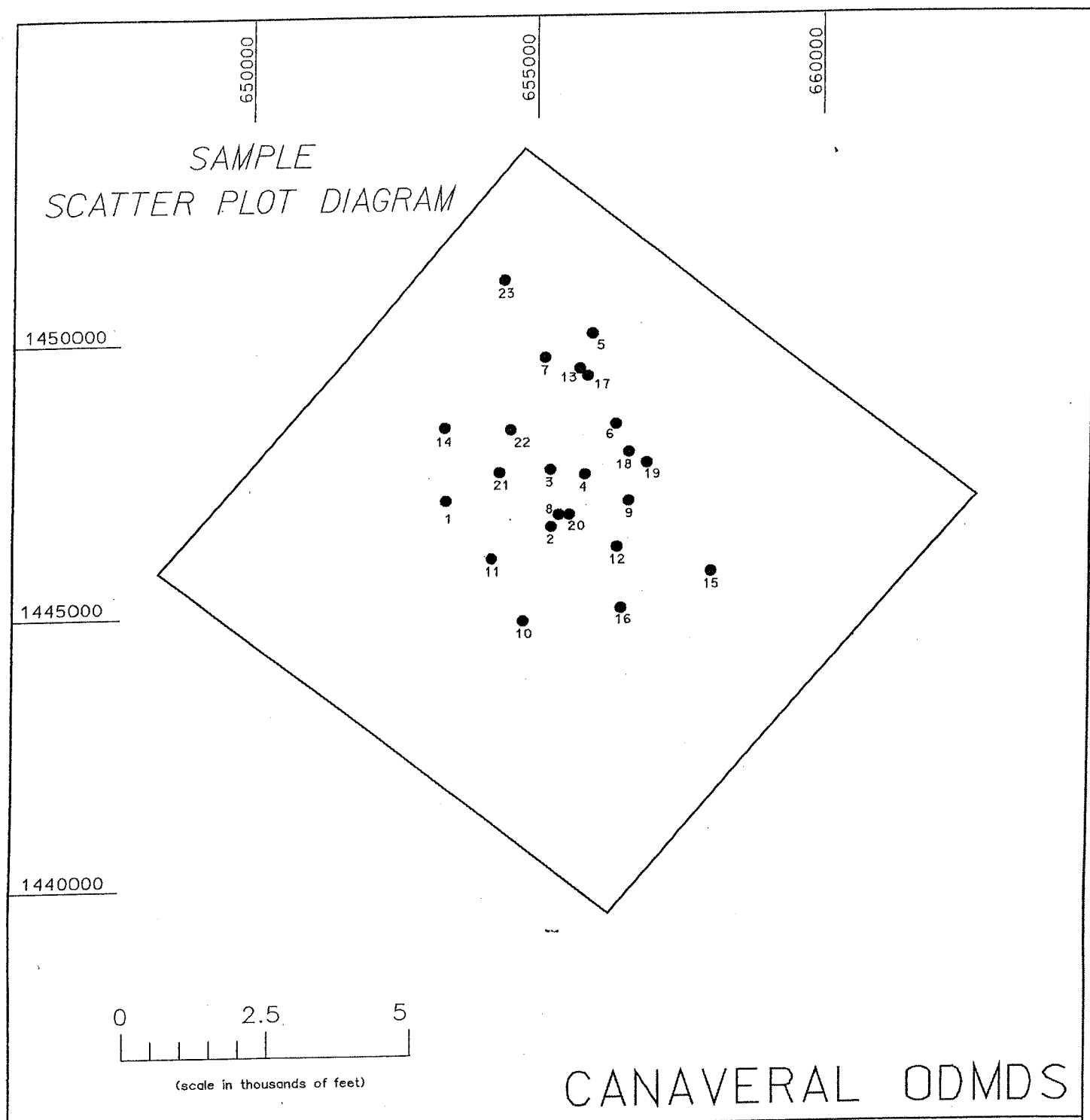
See APPENDIX 02325-C at the end of this Section (1 page).

3.11 Sample Scatter Plot Diagram and Table

See APPENDIX 02325-D at the end of this Section (2 pages).

-- End of Section --

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PROJECT NAME: CANAVERAL HARBOR, MD

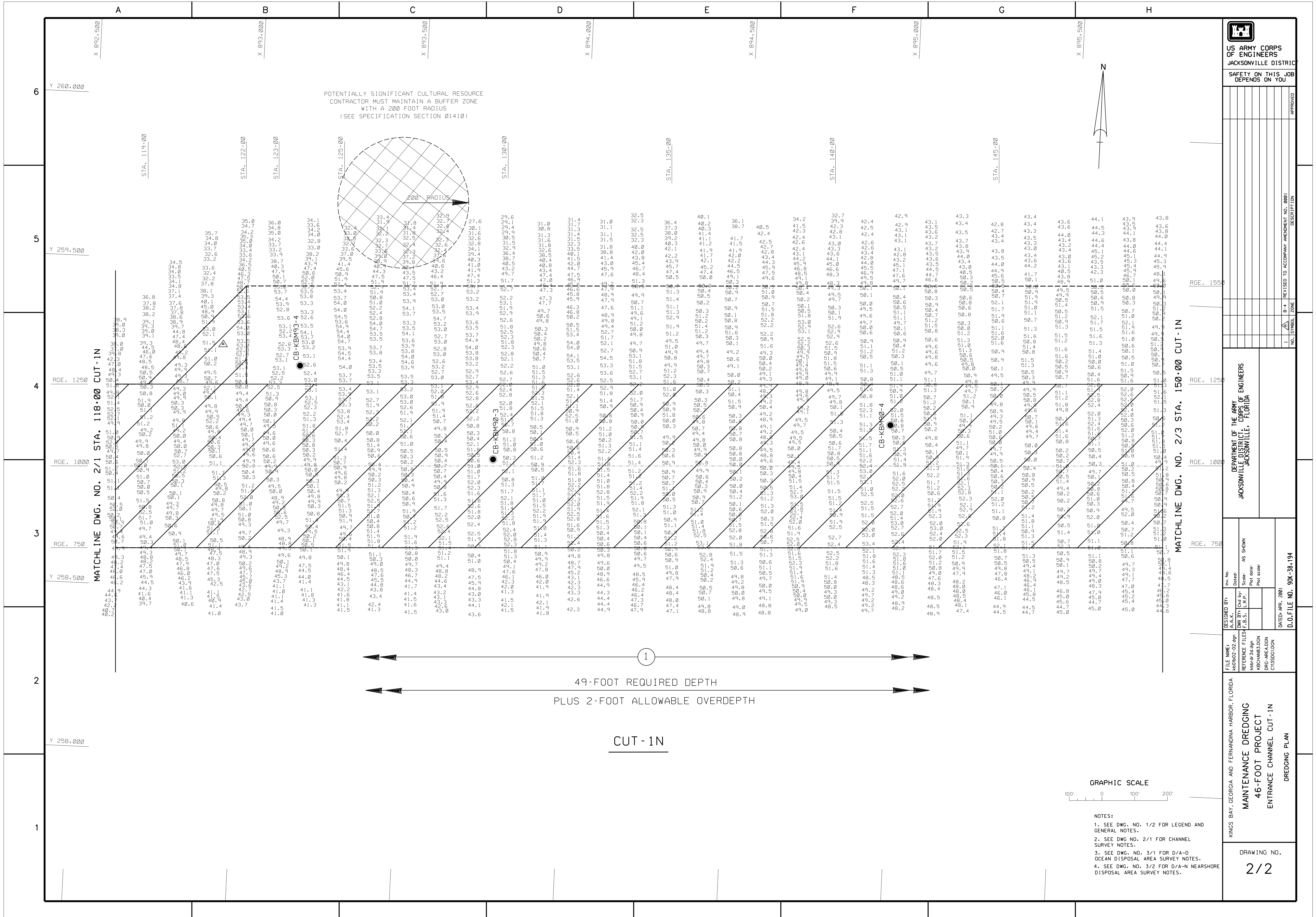
CONTRACT NUMBER: DACW17-xx-x-00xx

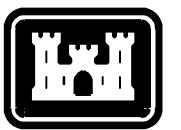
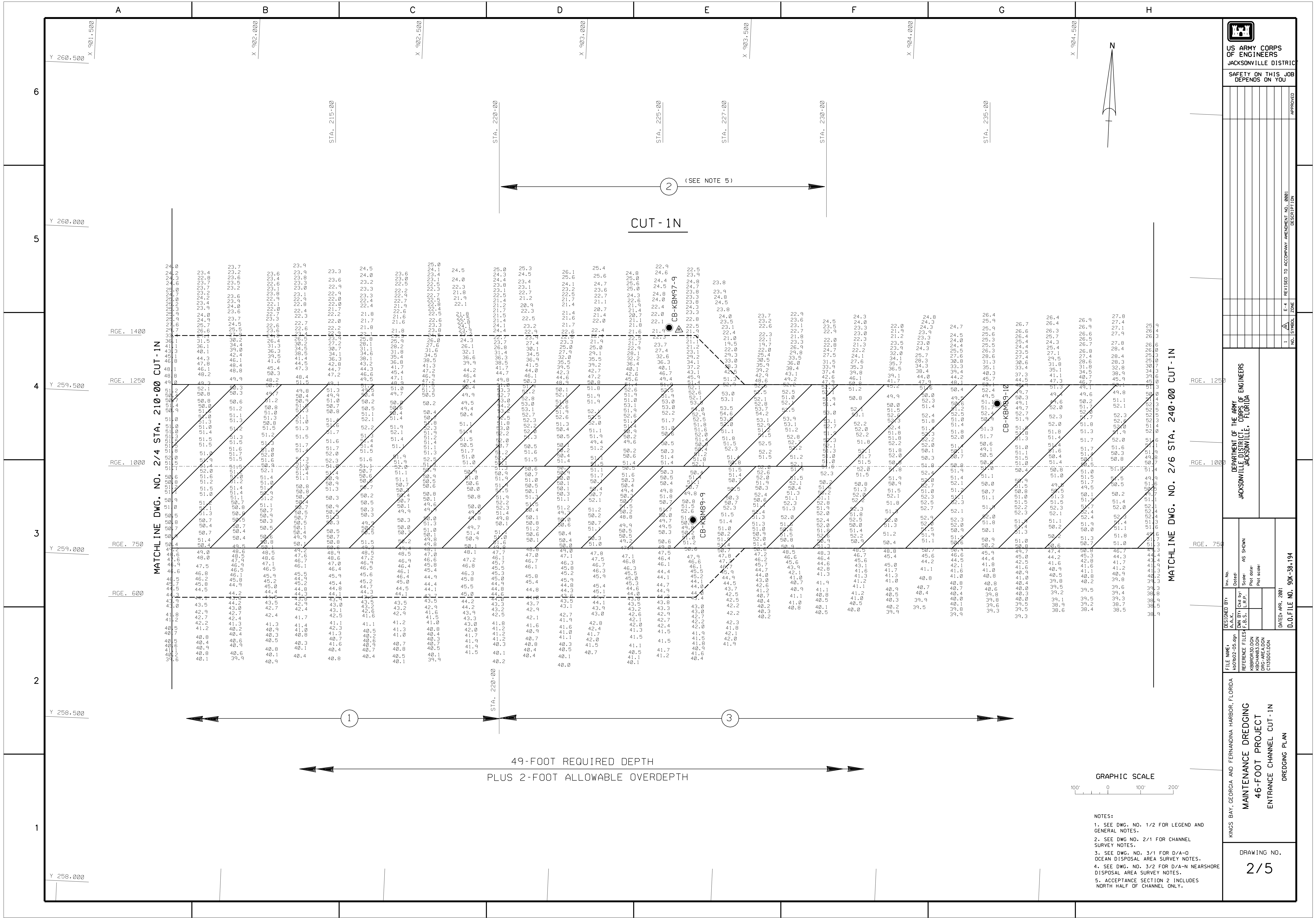
DATES OF WORK: 1 JUN 01 - 20 SEP 00 NUMBER OF PLOTS: 23

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				SAMPLE					
To Accompany Dump Scatter Plot Diagram									
ETS Data Sheet - Canaveral Harbor, MD									
Contract Number: DACW17-xx-x-00xx									
-- Data to be extracted from ETS ASCII data files --									
Trip	Date	Time	Vessel	Captain	Northing	Easting	Draft *	Equip	Volume
1	6/1/01	1400	#1	Nichols	1446403.88	655464.12	10.8	Scow	2300
2	6/2/01	1320	#1	Nichols	1446534.08	655247.57	9.7	Scow	2100
3	6/3/01	800	#1	Nichols	1446318.51	655965.26	4.3	Scow	2000
4	6/4/01	1400	#1	Nichols	1446534.08	655247.57	9.7	Scow	2400
5	6/5/01	1320	#1	Nichols	1446116.46	655384.26	4.3	Scow	2700
6	6/6/01	800	#1	Nichols	1446116.46	655384.26	4.1	Scow	2300
7	6/7/01	1400	#1	Nichols	1446477.24	655598.84	4.3	Scow	2100
8	6/8/01	1320	#1	Nichols	1446386.15	655540.29	9.9	Scow	2000
9	6/9/01	800	#1	Nichols	1446297.91	656188.73	4.3	Scow	2700
10	6/10/01	1400	#1	Nichols	1446477.24	655598.84	4.1	Scow	2300
11	6/11/01	1320	#1	Nichols	1446367.34	655515.82	4.3	Scow	2100
12	6/12/01	800	#1	Nichols	1446555.96	655343.22	12.2	Scow	2000
13	6/13/01	1400	#1	Nichols	1446570.30	655286.70	10.7	Scow	2400
14	6/14/01	1320	#1	Nichols	1446367.17	655474.09	11.2	Scow	2700
15	6/15/01	800	#1	Nichols	1446541.61	655394.83	4.3	Scow	2300
16	6/16/01	1400	#1	Nichols	1446655.38	655576.04	10.3	Scow	2100
17	6/17/01	1320	#1	Nichols	1446356.68	655452.03	4.3	Scow	2000
18	6/18/01	800	#1	Nichols	1446454.22	655392.73	11.2	Scow	2400
19	6/19/01	1400	#1	Nichols	1446522.54	655134.69	4.3	Scow	2700
20	6/20/01	1320	#1	Nichols	1446294.50	655339.36	4.7	Scow	2300
21	6/21/01	800	#1	Nichols	1446359.98	655410.29	10.5	Scow	2100
22	6/22/01	1400	#1	Nichols	1446508.21	655193.67	11.8	Scow	2000
23	6/23/01	1320	#1	Nichols	1446392.40	655368.42	4.3	Scow	2400
* Draft at commencement of dump									





US ARMY CORPS
OF ENGINEERS
JACKSONVILLE DISTRICT

SAFETY ON THIS JOB
DEPENDS ON YOU

NO.	SYMBOL	ZONE	REVISION	DESCRIPTION
1				

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

DESIGNED BY: A.A.K.	INCHES: 1/8"	DATE: 10/1/81
FILE NAME: KBR030.DGN	SCALE: AS SHOWN	DATE: 10/1/81
REFERENCE FILE: KBR030.DGN	SCALE: AS SHOWN	DATE: 10/1/81
DATE: 10/1/81	SCALE: AS SHOWN	DATE: 10/1/81

DRAWING NO.
2/5

KINGS BAY, GEORGIA AND FERNANDINA HARBOR, FLORIDA
MAINTENANCE DREDGING
46-FOOT PROJECT
ENTRANCE CHANNEL CUT - 1N
DREDGING PLAN

NOTES:
1. SEE DWG. NO. 1/2 FOR LEGEND AND GENERAL NOTES.
2. SEE DWG. NO. 2/1 FOR CHANNEL SURVEY NOTES.
3. SEE DWG. NO. 3/1 FOR D/A-O OCEAN DISPOSAL AREA SURVEY NOTES.
4. SEE DWG. NO. 3/2 FOR D/A-N NEARSHORE DISPOSAL AREA SURVEY NOTES.
5. ACCEPTANCE SECTION 2 INCLUDES NORTH HALF OF CHANNEL ONLY.

